AN EXPLORATION OF EMERGENCY STAFF PERCEPTIONS AND EXPERIENCES OF TEAMWORK IN AN EMERGENCY DEPARTMENT IN THE KINGDOM OF SAUDI ARABIA

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List of Abbreviations

A+E	Accident and Emergency
AHRQ	Agency for Healthcare Research and Quality
ATS	Australian Triage Scale
ASSIA	Applied Social Sciences Index Abstract
BLS	Basic Life Support
CG	Control Group
CLC	Closed-loop communication
CLT	Clinical Leadership Teams
CPR	Cardiopulmonary Resuscitation
CTAS	Canadian Emergency Department Triage and Acuity Scale
CRS	Charitable Relief Society
DoD	Department of Defence
ED	Emergency Department
ECS	Emergency Care System
EM	Emergency Medicine
ER	Emergency Room
ESI	Emergency Severity Index
EU	Emergency Unit
GCC	Gulf Cooperation Council
ICU	Intensive Care Unit
IG	Interventional Group
IT	Information Technology
IOM	Institute of Medicine
IP	Interprofessional
IPT	Inter-Professional Teamwork
IV	Intravenous fluid

LOS	Length of Stay
MD	Physician
MOH	Ministry of Health
NAHA	National Ambulance Health Association
NCAT	Nursing Culture Assessment Tool
NHS	National Health Service
NP	Nurse Practitioner
NTP	National Transformation Programme
PA	Physician Assistant
PCC	Population, Concept, Context
PED	Paediatric Emergency Department
PhD	Doctor of Philosophy
PHC	Primary Health Care Centre
PIS	participant Information Sheet
PMC	PubMed Central
RN	Registered Nurse
KSA	Kingdom of Saudi Arabia
SFE	Simulation and Fire-drill Evaluation
SRCA	Saudi Red Crescent Authority
SBAR	Situation, Background, Assessment, and Recommendation
TEAMTM	Team Emergency Assessment Measure
TeamSTEPPS™	Team Strategies and Tools to Enhance Performance and Patient Safety
TPQ	Teamwork Perceptions Questionnaire
TTP	Time to Physician
UK	United Kingdom
US	United States
VRP	Vision Realization Programme

WHO	World Health Organization

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Abstract

Background: Teamwork practices have been recognised as a significant strategy to improve patient safety, quality of care, and staff and patient satisfaction in healthcare settings, particularly within the emergency department (ED). The ED depends heavily on teams of interdisciplinary healthcare staff to carry out their operational goals and the core business of providing care to the seriously ill and injured. The ED is also recognised as a high-risk area concerning service demand and the potential for human error. Few studies have considered the perceptions and experiences of ED staff (physicians, nurses, allied health professionals, and administration staff) regarding the practice of teamwork, especially in the Kingdom of Saudi Arabia (KSA), and few studies have been conducted in KSA to explore the teamwork practices in EDs.

Aim: To explore teamwork practices from the perspectives and experiences of staff (physicians, nurses, allied health professionals, and administration staff) when interacting with each other in the admission areas of the ED in a public hospital in the Northern Borders region of the KSA.

Method: This research used a qualitative case study design, drawing on three data collection methods: documentary review, semi-structured interviews (n=22) with physicians (n=6), nurses (n=10), allied health professionals (n=3), and administrative staff (n=3) and six non-participant direct observations. All data were analysed using Braun and Clarke's thematic analysis.

Findings: The thematic analysis of the data yielded ten prominent themes, which were integral to understanding the staff's views and experiences with teamwork in the ED's admission areas. These themes revealed the barriers and the enablers experienced by the ED teams. The findings demonstrated that interdisciplinary teamwork is encouraged by a shared goal of patient care, reduced employee stress, and improved job satisfaction. In the ED, interdisciplinary collaboration was critical and functioned under a hierarchical structure, with a clear leader guiding decisions to achieve the best outcomes. However, barriers such as negative staff behaviours, staff shortages, and inadequate management support often hindered teamwork. Moreover, the study found that gender interactions and the high number of expatriates in the ED posed challenges such as discrimination and language barriers. In addition, the triage process, such as admitting non-urgent patients, contributed to

overcrowding and overwhelmed the teams. The findings revealed that effective teamwork depends on effective communication, multitasking, stress management, and leadership skills. Finally, these findings were examined and compared with the four domains (relational, processual, organisational, and contextual) of Reeves et al.'s (2010) conceptual framework for understanding interprofessional teamwork. However, individual factors emerged as a new fifth domain that is not a part of the framework also played a critical role in interdisciplinary teamwork in the ED.

Conclusion: Effective interdisciplinary teamwork is crucial in the ED in KSA due to the diverse cultural issues staff experience. Gender, language, social, and organisational issues can sometimes impose barriers to collaboration. Consequently, continuous teamwork training and support are necessary to improve the teamwork practices of the ED staff and ensure the provision of high-quality care to patients. The study's findings provide practical insights for healthcare policymakers, hospital administrators, the KSA Vision 2030, and other countries seeking to optimise patient safety and quality of care by implementing effective teamwork practices in an ED setting.

CHAPTER ONE: Introduction

1.1 Introduction

This chapter discusses the critical role of interdisciplinary teamwork in an emergency department (ED) and the rationale for the study. It emphasises the importance of interdisciplinary teamwork within the Kingdom of Saudi Arabia (KSA) context, highlighting the absence of existing literature, the high demand for ED services, and the alignment with Saudi Vision 2030. Also, this chapter discusses the main study aim and objectives and provides an overview of the study's approach and design. The chapter concludes with a summary of each chapter's content, providing an overview of the thesis structure.

1.2 Personal and Professional Research Interest (Declaration of Self)

My research interest in interdisciplinary teamwork in EDs developed from my experience as a receptionist in an ED in KSA from 2008 to 2011. During that time, I learned the importance of teamwork in managing the high-pressure, fast-paced nature of an ED. Working in the ED presented many challenges, often making our jobs incredibly difficult. These challenges included staff shortages, high demand, and a lack of resources. However, as my colleagues and I faced challenges and opportunities together, our insights and views contributed to the success of our team and the private hospital where we worked.

During that time, working together effectively to ensure coordinated care in the ED was crucial. Our collaboration allowed us to manage the flow of patients more efficiently, exchange experiences and ideas, reduce waiting times and ensure timely care for the ED patients. When we worked together, we often experienced "a good day," in which we felt satisfaction and accomplishment despite stress and challenges. This positive influence of teamwork on service provision and employee morale emphasises the necessity of effective teamwork practices for the optimal functioning of the ED. As a result of these experiences, I became interested in learning more about and improving teamwork practices in the ED setting, which led me to pursue further education and research opportunities abroad.

In addition, my interest in the multicultural nature of the workforce and gender separation in the country, as well as teamwork dynamics in healthcare settings, influenced my PhD topic selection. Moreover, my scientific background involves three academic degrees attained from

different universities. I hold a two-year diploma in English language from Youngstown State University, Ohio, United States (US) (2011-2013). In addition, I have a bachelor's degree in Healthcare Administration from the University of Michigan, Michigan, US (2013-2016). In addition, I hold a master's degree in Healthcare Administration from Marshall University in West Virginia, US (2017-2019). I am currently pursuing my PhD studies in the School of Health Sciences at Cardiff University in the UK. These ongoing experiences have enabled me to develop my academic and management skills in healthcare and motivated my interest in exploring teamwork in the ED.

Globally, the concept of teamwork is gaining increasing attention, and collaboration among healthcare professionals is acknowledged as pivotal to delivering high-quality, safe, and effective care to patients (Aase et al. 2014; Al-Araidah et al. 2018; Alkhaqani 2022). Several countries have highlighted the importance of effective teamwork in healthcare reform (Finn et al. 2010). As a result, policymakers, practitioners, and academics have underscored the importance of teamwork in enabling efficient and safe outcomes (Scott 2021).

In addition to my research interests, I am committed to teaching and supporting future healthcare administrators. I hope to share my knowledge and experiences with students to support their professional development and encourage a culture of effective teamwork within healthcare. My career goal is to create an environment where the next generation of healthcare administrators can collaborate and learn to achieve excellence in patient care and job satisfaction.

1.3 Background and Rationale of the Study

1.3.1 Study background

According to a well-established belief, a cooperative team's contributions exceed an individual's (Salas et al. 2005; Grover et al. 2017). It is increasingly apparent that teams are performance units in many organisations (Castka et al. 2001; Reeves et al. 2010; Khademian et al. 2013), and a growing organisation requires the cooperation of groups of people to achieve goals that contribute to the effectiveness of the organisation as a whole (Anitha 2014; Amanchukwu et al. 2015). Recognising the significance of Inter-Professional Teamwork (IPT), the World Health Organisation (WHO) has emphasised its importance and advised education programmes to prepare healthcare students to work effectively in teams (WHO 2010; Aase et al. 2014). In healthcare, teamwork practices have been recognised as a

fundamental strategy to improve patient safety, particularly in ED settings (Grover et al. 2017; Alsabri et al. 2020).

An ED is a complex and often unpredictable environment where health practitioners must work together to manage various patient needs, from minor injuries to life-threatening emergencies (Ajeigbe et al. 2013; Emergency Staffing Solutions 2019). However, working in an ED can pose communication and coordination challenges, negatively impacting patient care and staff satisfaction (Mao and Woolley 2016; Alsabri et al. 2020). Further, EDs are perceived as high-risk areas due to service demand and the potential for human errors (Ajeigbe et al. 2014; Grover et al. 2017).

Teamwork has been recognised as an effective strategy to reduce human errors, enhance operational efficiency, improve job satisfaction, and promote patient care, specifically in the EDs (Rabøl et al. 2011; Grover et al. 2017). According to an Institute of Medicine (IOM) report, poor teamwork amongst healthcare staff members hinders appropriate and safe patient care delivery (IOM 2004; Keers et al. 2013), a finding which the United Kingdom (UK) Department of Health (National Audit Office 2005) supports. Interdisciplinary teamwork and communication failures can lead directly to compromised patient care, staff distress, tension, and inefficiency and contribute significantly to medical errors (Weller et al. 2014).

In EDs, interdisciplinary teams often work cooperatively under chaotic conditions, unpredictable situations, and tight time constraints, requiring effective teamwork to carry out tasks rapidly and correctly (Ajeigbe et al. 2013; 2014). An ED is known by various terms in different countries, including Emergency Room (ER), Accident and Emergency (A+E), Emergency Units (EUs), Receiving Room or Casualty (Hansen et al. 2019). The ED functions within a broader context and typically serves as the central component of an Emergency Care System (ECS) framework, as Hansen et al. (2019) describe. The WHO (2018) describe the ECS framework as a series of essential care components that start functioning from the scene of injury or illness and continue during transport, the emergency unit and early inpatient care (Reynolds et al. 2017).

EDs function at the intersection of community and hospital care and interact with most units and programmes within hospitals (Hansen et al. 2019). The ED is a unique area where patients can access care, ideally 24 hours a day, 7 days a week. An ED can provide care for various medical emergencies (e.g., illness, injury and mental health) for all age groups. Evidence suggests that the purpose of ED services is to ensure that people in urgent and

immediate need of care can access high-quality care and the decision-making response required to enhance their chances of survival (Noohi et al. 2013; Lubbad and Al-Aseri 2015). For the public, the ED is one of the primary interfaces of the health service with the community. Consequently, an ED should be supported to provide the care people expect and deserve.

Evidence from around the world shows that the ED is an essential part of the health system that serves as the first contact point in many countries, including the KSA (Jennings et al. 2015; Lubbad and Al-Aseri 2015; Mehmood et al. 2018; WHO 2020). An ED is also a mediator between pre-hospital and in-hospital care that can enhance the results of the first treatment stage and must support patients before further treatment (Bashiri et al. 2019).

In many countries, the ED also contributes to monitoring public health by collecting data about infectious diseases such as sexually transmitted infections, tuberculosis, severe acute respiratory syndrome, and environmental emergencies (e.g., heat waves and toxic spills) and sharing these data with public health departments (Dawoud et al. 2016).

In the KSA, EDs are used for urgent and non-urgent care and are more likely to receive patients than any other health department (Alyasin and Douglas 2014; MOH 2018). EDs are dynamic environments subject to frequent changes (Westbrook et al. 2018). New processes and protocols can all impact the way that teams work together, and thus, it is necessary to continually assess the effectiveness of teamwork techniques and adapt them as required (Marriage and Kinnear 2016; Alyami 2021; Costa et al. 2023).

1.3.2 Study rationale

Gaps in the literature underpin the rationale for this study, the unique healthcare context in KSA, the high demand and risks in KSA EDs, and the national Saudi Vision 2030. These reasons are described in detail below.

1.3.2.1 Literature gaps

The scoping review in Chapter 4 demonstrates that interdisciplinary teamwork in EDs has been extensively documented as a critical component of providing high-quality patient care (Ervin et al. 2018; Lapierre et al. 2019; Bourgault and Goforth 2021; Alkhaqani 2022). However, the existing relevant research has investigated perceptions from one or two specific roles, such as nurses and physicians, rather than from all levels of staff (physicians, nurses,

allied health professionals, and administrative personnel) (Kalisch et al. 2010; Ajeigbe et al. 2013; Jones et al. 2013; Plummer and Copnell 2016; Weaver et al. 2017; Grover et al. 2017). Despite the studies' strengths, the data are limited and provide only a snapshot of staff perceptions using descriptive statistics, and lack a more comprehensive in-depth investigation of the perceptions, feelings, opinions, and experiences of the practice of teamwork in EDs. Prior studies have not fully explored the dynamics of team members' interactions, the effects of teamwork on employees' job satisfaction and performance, or the specific barriers and enablers that impact their abilities to collaborate effectively. For example, Grover et al. (2017) highlighted a lack of understanding of how teamwork functions from the perspectives of the various professional teams in EDs. Grover et al. (2017) stated that more research is required to explore these dynamics to understand better how interdisciplinary teams interact and collaborate. Furthermore, the studies in the literature relied exclusively on surveying perceptions of the ED staff rather than using alternative methods such as observations, focus groups, and document reviews, as these can help to provide comprehensive information regarding phenomena and events (Thurmond 2001; Natow 2020).

The scoping review also revealed few studies focusing on this area within the specific context of EDs in the KSA. Few studies have investigated the interdisciplinary team's perceptions and experiences regarding teamwork, especially in the KSA. Some previous studies have found that the perspectives and experiences of healthcare staff regarding teamwork, especially the skills, barriers, and facilitators they face, offer invaluable insights into the status of teamwork in healthcare settings (Al Sayah et al. 2014; Grover et al. 2017; Lapierre et al. 2019; Scott 2021; Alyami 2021). Identifying the specific barriers and facilitators that different types of emergency care staff experience can help reveal their unique challenges and opportunities (Clement et al. 2016; Grover et al. 2017; Lapierre et al. 2019; Bijani et al. 2021).

Furthermore, research on interdisciplinary teamwork in healthcare has demonstrated the importance of analysing and understanding the context to gain insight into the functions, practices, and impacts of teams in different countries and settings (Aase et al. 2014; Alyami 2021; Reeves et al. 2010; Aveling et al. 2018; Lapierre et al. 2019). This context is explored below.

1.3.2.2 Unique healthcare context in the KSA

Saudi Arabia's healthcare system offers a unique opportunity to study teamwork due to its distinctive demographics and organisational structure. The public hospitals rely heavily on the international workforce, with Saudi physicians comprising only 45% and Saudi nurses comprising 58% of the total professional workforce (MOH 2021). This reliance has created a diverse cultural environment among healthcare workers, which can impact the quality of care and patient safety (Al-Turki 2019).

The KSA's unique cultural context can complicate teamwork dynamics in healthcare settings. Cross-cultural communication can become an issue due to the different cultural backgrounds of healthcare workers, which is a concern for healthcare organisations as effective communication is essential for safe and high-quality patient care (The Institute of Medicine 2008; Abolfotouh et al. 2017). Furthermore, the workplace, including healthcare settings, is often gender-segregated, which can reduce opportunities for open communication and diverse perspectives that enhance collaborative problem solving among male and female employees. (Alyami 2021). It is essential to understand how gender segregation and diversity influence teamwork in EDs to develop strategies to avoid teamwork breakdowns and promote effective collaboration.

Teamwork breakdowns continue to be a significant cause of errors and near misses in healthcare, with root cause analysis suggesting that ineffective teamwork (e.g., communication) causes 60–70% of serious patient incidents (Rabøl et al. 2011). Studies have shown that teamwork influences clinical outcomes (e.g., diagnostic accuracy, time to response/treatment, patient outcomes (e.g., complications, length of stay (LOS), Schmutz and Manser (2013) and employee outcomes (e.g., well-being and patient satisfaction, Ogbonnaya et al. (2018).

Therefore, insights from staff within this context are particularly valuable because they provide a detailed understanding of the realities and challenges faced in a Saudi ED. Understanding the local context and culture is essential for developing effective strategies for teamwork.

1.3.2.3 High demand and risk in Saudi Arabia's EDs

In the KSA, the EDs of public hospitals function as the central gateways to medical care, which has resulted in high demand for these units (Khattab et al. 2019). In 2021, the Saudi

Ministry of Health (MOH) issued a report stating that the number of patients visiting the EDs in KSA exceeded the number of visits to outpatient clinics, especially in the Northern Borders hospitals (MOH 2021). According to an MOH statistical report, the number of the EDs visits in 2018 was 456,060, greater than the region's population of 375,310 (MOH 2018). In 2021, an MOH healthcare report showed that at least 87% of emergency visits in the Northern Borders region were disease-related (MOH 2021). The other reasons for emergency visits included surgeries (MOH 2021). This report also identified that the total number of ED visits in the Northern Borders region was 433,999 (MOH 2021). This number exceeds the total number of visits to outpatient clinics in MOH hospitals, which was 310,048 (MOH 2021), indicating that Saudis depend heavily on this service to access healthcare.

However, research has identified that medical errors can occur when large numbers of patients overwhelm EDs (Bernstein et al. 2009; Kulstad et al. 2010; McKenna et al. 2019). Moreover, research has found that the ED is a high-risk environment because of the complexities of patient safety issues such as LOS (Farmer 2016; Amaniyan et al. 2019). Research has identified teamwork practices as a vital strategy for improving patient safety in healthcare, particularly in the EDs, as it accelerates decision-making and response time under high-pressure situations (Lapierre et al. 2019; Grover et al. 2017; Kilner and Sheppard, 2010).

1.3.2.4 Alignment with Saudi Vision 2030

As discussed in Chapter 2, Saudi Arabia’s MOH strives to enhance the nation’s health sector (Alasiri and Mohammed 2022). Vision 2030 articulates several objectives for improving health delivery systems, nursing, trade, education, communication, and science (Alsufyani et al. 2020). A primary objective of Saudi Vision 2030 is to improve the population's health status by improving the health delivery system (Alsufyani et al. 2020). The Vision highlights nursing's crucial role in the multidisciplinary healthcare team and seeks to make nursing and medical support more attractive as career choices (AL-Dossary 2022). The Saudi vision also aims to improve the quality and reduce the waiting time in EDs (Saudi Vision 2030 2016).

Studies have shown that better patient outcomes and higher quality of care are associated with higher team functioning (Grover et al. 2017; Alsabri et al. 2020), improved efficiency (Siassakos et al. 2011), cost savings (Ervin et al. 2018; Li et al. 2018), increased job satisfaction (Ajeigbe et al. 2013; Al Sabei et al. 2022), reduced workload and fewer burnout incidents (Vail et al. 2023; Al Sabei et al. 2022). These benefits are attributed to the

efficiency of better-functioning teams, which can operate more effectively with complex tasks and produce better job performance.

Therefore, developing a culture of collaboration and continuous improvement will help achieve the KSA's vision of improving health access and quality. The findings of this study will inform the Saudi MOH about the barriers and enablers for successful teamwork, enhance its understanding of how teams function in an ED, and how to support team performance in the future.

1.4 Aims and Objectives

1.4.1 Aims of the study

This study aimed to explore teamwork practices from the perspectives and experiences of staff (physicians, nurses, allied health professionals, and administration staff) when interacting in the ED admission area in a public hospital in the KSA's Northern Borders region.

1.4.2 Research objectives

The research objectives of this study were to:

- Ascertain the perspectives of staff (physicians, nurses, allied health professionals, and administration staff) about the teamwork practices in the ED of a public hospital in the Northern Borders region of the KSA.
- Examine the staff's experiences concerning teamwork when interacting with each other in the admission areas in the ED of a public hospital in the Northern Borders region of the KSA.
- Identify the potential barriers and enablers experienced by the emergency staff when practising teamwork in the admission areas in the ED.
- Determine whether the ED staff members work in teams or independently and why.
- Identify the teamwork skills required in the admission areas of the ED.

1.5 Research Approach and Design

A qualitative case study was employed to achieve the above aim and objectives and allow for a detailed and in-depth analysis of teamwork practices within a specific ED setting. Using one public hospital in the Northern Borders region as a focus, the study provided in-depth contextual insights. Semi-structured interviews were conducted with physicians, nurses, allied health professionals, and administrative staff to gain insights into perspectives and experiences regarding ED teamwork and address the study's objectives. A semi-structured approach allowed for flexibility in probing deeper into specific areas of interest while covering key topics.

Direct observations were conducted in the admission areas of the ED to understand the real-time dynamics of teamwork. This method allowed the observation of how team members interacted, coordinated, and performed their roles. In addition, relevant documents, such as the Hospital Policy and Procedures book (2020), the ED book (2020), and the teamwork practice evaluation in the ED (2021), were reviewed to enrich the data collected from interviews and observations. This material contributed to understanding the organisational context and factors influencing teamwork practices.

1.6 Structure of the Thesis

The thesis has ten chapters.

Chapter 1 provides an overview of the research, background information, and the aim and objectives. It sets the stage for the rest of the thesis. Chapter 2 offers an overview of the study context in KSA, including a description of the ED system. It also includes a general depiction of the nation and its demographic characteristics, a summary of the healthcare delivery system, and significant health metrics. Chapter 3 provides an overview of the concepts of teamwork in the context of healthcare. Chapter 4 comprehensively examines the relevant literature, highlighting the existing knowledge and understanding of the subject. It includes a critical analysis of the existing literature and identifies gaps in knowledge that the research aims to address. Chapter 5 details the methodology and the research paradigm associated with the case study design. In addition, it presents a comprehensive account of the methods employed during the research and analysis and explains why specific choices were made. Chapters 6, 7 and 8 provide an account of the demographic features of respondents who participated in the semi-structured interviews. In addition, they present the findings of the

semi-structured interviews, observations, and document reviews. Chapter 9 utilises Reeves et al.'s (2010) conceptual framework as a lens to both structure and compare the emergent findings. It also evaluated how these findings align with the broader literature and highlighted the study's limitations. Chapter 10 discusses the study's contributions to existing knowledge, its recommendations, implications and conclusions.

CHAPTER TWO: Background

2.1 Introduction

This chapter provides essential contextual background for this research. It overviews the KSA's characteristics, including its geographical features, demographics, culture, and healthcare. Additionally, this chapter examines the diversity of the healthcare workforce, which includes various professions, nationalities, and genders. It also explains the wide range of healthcare services provided to citizens, such as public hospitals, private facilities, and specialised hospitals. Finally, this chapter considers the Saudi Vision 2030, an ambitious plan to improve healthcare, particularly ED services, and to empower women in the workplace.

2.2 Characteristics

The KSA was officially identified as an Arab nation following its consolidation in 1932 under the leadership of King Abdulaziz Al Saud (Cooper & Simmons 2005; Albougami 2015). The country is among the world's largest oil producers and a member of the Gulf Cooperation Council (Alshuwaikhat and Mohammed, 2017; Albreem et al. 2023). The sections below discuss national characteristics, including geography, demographics, and culture.

2.2.1 Geography

The KSA is a desert country situated in the Arabian Peninsula bordered by the United Arab Emirates, Bahrain, and Qatar in the east; the Red Sea in the west; in the north, Kuwait, Iraq, and Jordan in the North; and Yemen and Oman in the south (Ibtisam and Doka 2018). The Kingdom occupies about four-fifths of the Arabian Peninsula, with a total area of around 2,000,000 square kilometres (General Authority for Statistics 2020).

The country has 13 administrative provinces: these are the Riyadh region in the centre, Makah region in the west, Al-Madinah region in the north-west, Al-Qassim in the central, eastern region, the Aseer and Jazan regions in the south-west, Tabuk and Hail in the north-western regions, the Northern Borders region, Najran in the south, Al-Bahah in the south-west, and the Al-Jouf region in the north of KSA (General Authority for Statistics 2017). See Figure 1. This study took place in the Northern Borders region.

Figure 1 Map of the Kingdom of Saudi Arabia
Source: The Nations Online 2022

2.2.2 Demography

The KSA has the largest and fastest-growing population in the Gulf Cooperation Council region (GCC), a group of six countries in the Persian Gulf: Bahrain, Kuwait, Qatar, Oman, KSA, and the United Arab Emirates (Sajjad and Qureshi 2020). The KSA population in 2024 was 37,473,929 million, compared to 27.1 million in 2010 (General Authority for Statistics 2024). The estimated growth rate is 2.52%, and the birth rate is 2.27 births per woman. In 2024, 67% of the population was under 35; 0–14-year-olds comprised 30.3%, and 15–34 comprised 36.7% (General Authority for Statistics 2024). The Saudi population is estimated to be 39.8 million by 2025 and 54.7 million by 2050 (Sajjad and Qureshi 2020). The health of the Saudi population has improved, with life expectancy at 75.37 years today compared to 40.45 years in the 1950s (Sajjad and Qureshi, 2020). The growing population underscores the need to expand healthcare services and optimise health outcomes.

2.2.3 Culture

Islam and Islamic law largely shape the national culture (Littlewood and Yousuf 2000; Aldera 2017). In the Islamic religion, the Holy Quran (the Holy Book) and the Sunnah (the prophetic practice interpreted by the Prophet Mohammed; peace be upon him) are the guiding lights. Most KSA citizens practise Islam, which provides the framework for the country's culture (Littlewood and Yousuf 2000; Almutairi and McCarthy 2012). Almutairi and McCarthy (2012, p. 1) called the Kingdom a "unique blend of Arabic tribal traditions and customs and the Islamic worldview, which shapes the mindset and behaviour of the Saudi people." However, cultural norms and religious perspectives may be challenging to distinguish in the country because individual views frequently and undoubtedly reflect the interchangeable links between them, leading many to believe that both perceptions are the same (Al-Shahri 2002; Albougami 2015).

Family is one of the most essential pillars of society in the country. The Kingdom's society focuses on the traditional extended family (tribe) as a form of identity and status. In the tribe, masculinity prevails; males appear to have more power and authority, and respect towards them increases with their age and seniority. The perception is that males have more power and authority than females. Males are traditionally a family's breadwinners, while females are housewives and mothers (Al-Shehri, 2002; Qazzaz, 2009; Moghadam 2015).

Under Saudi law and tradition, males have had more rights than females in the past, but recently this has started to change. Females are becoming better educated, working in positions of prestige, and taking on more critical roles. For example, Princess Rima Al-Saud was the first KSA ambassador to the US (CNN 2019; Abdul Latif Jameel 2018). Saudi women work in various sectors, including hospitals, schools, universities, media, and banks. Females now have the same legal rights as men; for example, in September 2011, they were granted the right to vote, to stand in municipal elections in the city, and to become members of the Consultative Assembly of KSA (BBC 2015). However, females were not legally permitted to drive until June 2018 (BBC 2018). Despite progress, the educational system still separates male and female students in schools and universities. However, female students can compete with male students for scholarships abroad (Taylor and Albasri 2014).

2.2.3.1 Gender segregation

Gender segregation extends beyond educational sectors and affects the workplace (Aldossari and Calvard 2021). Traditional cultural norms and Islamic principles continue to influence the practice of gender segregation in various sectors (Alghamdi et al. 2022). Men and women have limited opportunities to work together in the same professional environments in the Saudi labour market (Alyami 2021). Generally, gender segregation is evident in workplaces where women are present, including the healthcare, education, and public service sectors. There are often strict policies and rules to ensure gender separation and the maintenance of modesty (Alyami 2021).

In recent years, however, efforts have been made to increase women's participation in the workforce and address gender segregation (The World Bank 2022). According to Saudi Vision 2030 (2016), the Kingdom aims to enhance employment opportunities for women and promote gender equality. In this context, several reforms have been implemented to encourage women's participation in the labour market, such as allowing women to drive, expanding employment sectors for women, and promoting entrepreneurship among women (The World Bank 2022).

The Saudi government's recognition of the increasing value of knowledge as an economic resource has resulted in a notable emphasis on transitioning from an oil-based to a knowledge-based economy (Onsman 2010; Bafarasat and Oliveira 2021). This recognition has also prompted a commitment to empowering women and putting them at the centre of the country’s educational and economic transformation plans, seeking to increase workforce participation from 22% to 30% by 2030 (The Vision 2030 2016; Jawhar et al. 2022).

The government is making efforts to address gender segregation at work, as well as gender equality and inclusivity. Supportive policies encouraging integration and promoting equal opportunities can contribute to a more inclusive and diverse workforce (Albelali 2020). Despite these reforms, gender integration in the workplace remains a challenge. Women still face cultural norms, family responsibilities, and limited career advancement opportunities (Aldossari and Calvard 2021; Alyami 2021).

2.3 Healthcare System in KSA: Structure, Services, and Patient Access to the EDs

2.3.1 Structure

The Kingdom's health system has three sectors: the MOH, the private sector, and other government sectors. The MOH has 287 hospitals (45,330 beds) (22.4 beds per 10000 population), which means only one bed for every 445 people in the population), much lower than the world average of 3.3 beds/1000 (Ahmed 2017). The MOH represents 57.74% of the total health services in the country. The private sector provides 39.23% of the total health services, with 159 hospitals (17,889 beds). The other government agency sectors, which provide services to a defined population, usually employees and their dependents, operate 51 hospitals (14,005 beds). This sector represents 10.29% of the total health services, including referral hospitals such as King Faisal Specialist Hospital and Research Centre, security forces medical services, army forces medical services, National Guard health affairs, ARAMCO hospitals, Royal Commission hospitals in Jubail and Yanbu cities, Red Crescent Society, and Ministry of Education hospitals (university hospitals) (MOH 2021).

Currently, the MOH provides free primary, secondary and tertiary healthcare to all citizens and expatriate workers who work in the government sector through public healthcare (Alrasheed et al. 2018). Primary health care centres (PHCs) provide primary care services for the population, such as preventive and treatment services. At the same time, cases that require further development are referred to public hospitals, and those who need highly specialised medical care are referred to central or specialised hospitals (Alfaqeeh 2015).

2.3.2 Services

Currently, the emergency medical service (EMS) is a crucial first point of contact for pre-hospital patients, responsible for providing pre-hospital care and transport falls on the Saudi Red Crescent Authority (SRCA) (AlShammari et al. 2017; Khattab et al. 2019). The inter-facility patient transfer is primarily the responsibility of hospitals instead of SRCA, with these hospitals running their ambulance transfer service. The EMS service in the Kingdom is based on an Anglo-American model, which aims to immediately transport patients to an ED by clinically competent paramedics (Al Mutairi et al. 2016). Nowadays, all hospitals and health centres of the MOH and the SRCA provide free emergency services for all citizens. These services include immediate response to emergencies and free emergency transportation (Alyasin and Douglas 2014; Unified National Platform 2019).

Moreover, citizens have access to unlimited, free medical care through a network of PHCs nationwide; some centres are open around the clock. In addition, patients have access to Urgent Care Clinics (UCCs), which provide unscheduled appointments with a "treat and

release" time frame of 60 minutes or less (Albalahi et al. 2021). Furthermore, the MOH is expanding telemedicine services using advanced technology. As a result, an e-health app called Seha application was introduced in 2018 to enable people to have face-to-face medical consultations on their smartphones. Saudi citizens can also use the MAWID mobile application or the 937-call centre to schedule appointments (MOH 2020; Alnasser et al. 2023). Depending on the urgency and medical condition, these services can be used as an alternative to the EDs.

2.3.3 Patient Access to the EDs

Despite continuous improvement in PHCs services and the Seha application (Alanzi et al. 2022), Saudis often visit the EDs for healthcare services when ill, believing their conditions are serious (Al Omar et al. 2021). Patients can access ED services differently, reflecting a flexible approach to emergency care. Patients access the EDs through self-referral (Almulhim et al. 2021), ambulance services (Khattab et al. 2019), referrals from healthcare facilities such as PHCs (Asmri et al. 2020), Seha application (Al-Kahtani et al. 2022), or the 937-call centre (Al-Shrobya et al. 2024).

The EDs function as the country's central gateway to medical care, resulting in high demand for this unit (Khattab et al. 2019). Indeed, data show that the total number of ED visits exceeded the total number of visits to outpatient clinics in MOH hospitals, resulting in high demand for EDs (Rehman and Alharthi 2016; Khattab et al. 2019; MOH, 2021).

EDs serve patients from various backgrounds, including locals, expatriates, and visitors (Khattab et al. 2019). The EDs treat cases ranging from minor conditions to life-threatening emergencies. Chronic disease burdens have increased in line with ED visits, increasing patient LOS in EDs and resulting in overcrowding (Khattab et al. 2019). Overcrowding is a significant challenge because it can compromise patient care (Khattab et al. 2019).

2.4 The Healthcare Workforce

The healthcare sector in KSA has significantly expanded, resulting in a workforce stratified by professions, nationalities, and genders (Al-Hanawi et al. 2019; MOH 2018). The workforce comprises professions ranging from doctors, nurses, pharmacists, allied health personnel, and administrative staff. According to MOH data (MOH 2018; MOH 2021), the percentages of Saudi nationals vary across these professions. Administrative workers are all

Saudi nationals, reaching 100%. However, doctors, nurses, and pharmacists have much lower proportions of Saudi nationals (40%, 42.6%, and 38.7%, respectively) (Alnowibet et al., 2021). Thus, non-Saudi residents heavily influence the composition of the healthcare workforce. (See Table 1 below).

Table 1 Healthcare Workforce Frequency and Percentage

Profession	Total Number	Saudi Nationals	Non-Saudi Nationals
Doctor	122,356	40.0%	60.0%
Nurse	201,489	42.6%	57.0%
Pharmacist	30,840	38.7%	61.3%
Allied Health Personnel	131,003	81.5%	18.5%
Administrative Worker	50,542	100%	0%

Source: MOH (2021)

National policies, economic plans, and cultural factors shape workplace stratification, especially in healthcare (Al-Hanawi et al. 2019). Expatriates have historically comprised most of the healthcare workforce in the Kingdom. This dominance is due to factors like the rapid expansion of healthcare services and a shortage of trained local professionals (Al-Hanawi et al. 2019). Indeed, Al-Hanawi et al. (2019) found that expatriates are filling roles ranging from doctors and nurses to allied health professionals, resulting in a stratified workforce in which expatriates fill high-skilled and essential positions. As a result, the Saudi government introduced Saudisation policies to address the heavy reliance on international labour. As part of these Saudisation initiatives, the Nitaqat programme categorises organisations based on their compliance with national employment targets using a classification system ranging from Red (low compliance) to Platinum (high compliance) (Basahal et al. 2023), serving as one motivation to hire local workers (Basahal et al. 2023).

The EDs in KSA are comprised of highly skilled professionals and non-specialised workers. Many emergency healthcare providers are not trained as emergency physicians and have developed emergency skills through unsupervised experience, resulting in ineffective care (Khattab et al. 2019). Moreover, nurse and physician shortages in KSA are major reasons for ED overcrowding (Al Owad et al. 2018). However, to address these challenges that the EDs

face, the government of KSA has launched a 2030 vision to develop all sectors in the country, including emergency care in the EDs. Below is a brief overview of the Saudi Vision 2030.

2.5 Vision 2030

In 2016, Crown Prince Muhammad Bin Salman announced Saudi Vision 2030 with a strategic plan for the coming fifteen years (Saudi Vision 2030 2016). Vision 2030 outlined the Kingdom's general objectives and targets to become a world-class model of a successful and pioneering country (Saudi Vision 2030 2016). The country was to achieve its Vision 2030 goals through three organised major pillars: a vibrant society, a thriving economy, and an ambitious nation (Saudi Vision 2030 2016). While oil is the backbone of the KSA economy, the government believes the country's future wealth depends on developing human resources and the efforts of the younger generation (Alshuwaikhat and Mohammed 2017).

The National Transformation Programme (NTP) 2020 was launched in 2016 via the Vision Realization Programmes (VRPs), involving 24 government agencies to achieve Vision 2030. The NTP aimed to develop the governmental work and establish the needed infrastructure to accomplish the requirements of Vision 2030 (Saudi Vision 2030 2016). The period between 2016 and 2020 was considered the start of the vision, meaning 2016 was the baseline, and 2020 was the time to examine the current statistics on improving strategic objectives.

2.5.1 Saudi Vision 2030 and healthcare

The Saudi government is working to improve the MOH and its responsibilities in every region. Saudi Arabia's 2030 Vision outlines several strategic healthcare initiatives to enhance healthcare quality and prepare healthcare sectors for future privatisation (Rahman 2020). One initiative is to separate healthcare from the MOH and transfer it to Accountable Care Organisations (ACOs) competing on quality, efficiency, and productivity (Alharbi et al. 2022). The main goal of the ACO is to enhance patient care and reduce healthcare costs through preventive care, eliminating unnecessary services, and minimising medical errors (Alharbi, Nassar et al. 2022). Some hospitals and other government agencies have already implemented this initiative (Alharbi, Nassar et al. 2022).

Additionally, digital services have been expanded to reduce delays and cut tedious bureaucracy, which can be automated and/or streamlined significantly (Saudi Vision 2030 2016). Adopting digital health solutions like the Sehhaty app has improved communication within healthcare organisations and facilitated patient management. These technologies can improve emergency services efficiency, reduce patient waiting times, and enhance coordination (Alharbi, Alsubki et al. 2022).

2.5.2 Vision 2030 and ED reforms

Significant progress has been made in EDs since implementing the Vision 2020 reforms. For example, emergency medical care provided to patients within four hours of arrival has risen from 36% in 2016 to over 87% in 2021 (Riley et al. 2023), and the government aims to increase this percentage to create a shorter waiting time in the EDs in the coming years (Alharbi et al. 2023). Additionally, the Ada'a programme, launched under Vision 2030, monitors key performance indicators, such as the ED LOS, to identify opportunities for improvement (Alharbi et al. 2023). A comprehensive analysis of the data gathered identifies factors influencing the LOS, such as shift timing, seasonal variations, the severity of patients' conditions, and hospital types. It allows the development of targeted policies and interventions to improve patient outcomes and increase ED efficiency (Alharbi et al. 2023).

The vision intends to implement advanced technologies, increase training opportunities, and ensure that high-quality emergency care is available across the country, ensuring the entire population has access to it. As part of the plan, more EDs will be opened, resource distribution will be improved, and prevention will be promoted to reduce chronic diseases that burden emergency services (Alharbi et al. 2023). Ultimately, the objective of Vision 2030 is to establish the country as a leader in healthcare innovation and excellence. The initiatives are aimed at contributing to the current functional efficiency and the long-term sustainability of healthcare, specifically the EDs in the country (Alharbi et al. 2023).

2.6 Summary of the Chapter

This chapter has discussed the main geographical, cultural, and societal factors that determine KSA, focusing on its Islamic values, traditional beliefs, and ongoing transformation under Vision 2030. Saudi healthcare has developed significantly, and EDs play a vital role in providing emergency medical care. With Vision 2030, the country seeks to improve its healthcare system, providing the necessary training while addressing challenges such as the

EDs' high demands and the reliance on international workers. The next chapter explores the concepts and the roles of teamwork in healthcare, particularly in the EDs.

CHAPTER THREE: Teamwork Concepts

3.1 Introduction

This chapter begins by defining teamwork in general and examining team dynamics in healthcare environments such as the EDs. It critically explores teamwork models and the terminologies of healthcare teams and highlights the appropriate term for this study. Further, this chapter examines the strengths and weaknesses of teamwork in healthcare, particularly in KSA. Finally, this chapter discusses the concepts and the role of leadership within teams.

3.2 Overview of Teams and Teamwork

Over the past twenty years, teamwork has been extensively researched and documented internationally. However, reaching a common definition of healthcare-related teamwork and its associated concepts is difficult (Xyrichis and Ream, 2008; Driskell et al. 2018; Ogbonnaya et al. 2018) because previous research has been scattered across different settings, facilities and functional diversity (Ogbonnaya et al. 2018). Fortunately, academic interest in teamwork has increased over the last decade, specifically concerning healthcare teams (Brown et al. 2015; Weiss and Hoegl 2015), with research seeking to clarify and define the concepts. Clearly defining teams and teamwork is crucial to providing a set of considerations for teamwork. The following sections critically discuss the definitions of teams and teamwork in general and healthcare settings.

3.2.1 Defining Team

Schmutz et al. (2019, p. 2) defined teams as "identifiable social work units consisting of two or more people with several unique characteristics." Schmutz et al. (2019) referred to several characteristics that Salas et al. (2007) defined as crucial for effective team dynamics: (a) dynamic social interaction with meaningful interdependencies, (b) shared and valued goals, (c) a discrete lifespan, (e) distributed expertise, (f) clearly assigned roles and responsibilities. Rydenfält et al. (2018, p. 349) defined a team as "a group of people who are set to work together on a task".

3.2.2 Defining teamwork

Teamwork has no common definition, as various authors have developed definitions (Driskell et al. 2018; Brown et al. 2015; Grover et al. 2017). While team implies organisational aspects, teamwork implies action. It also indicates that for something to be teamwork, there must be a corresponding team (Scott 2021).

Teamwork can be defined as "a process in which team members, using their knowledge, experience and skills through dynamic interaction with other team members, seek to achieve the common goals of the organisation, and thus achieve a synergistic effect" (Berber et al. 2020, p. 1). According to Driskell et al. (2018, p. 334) "teamwork is the process through which team members collaborate to achieve task goals. Teamwork refers to the activities through which team inputs translate into team outputs, such as team effectiveness and satisfaction."

As described in these definitions, the essence of teamwork is collaboration involving a group working together towards a common goal. These definitions commonly suggest that teams must dynamically exchange information and resources among members and coordinate their efforts to accomplish a particular task. In other words, teams must actively participate in teamwork (Schmutz et al. 2019).

However, in practice, teams may have difficulty collaborating (Diefenbach and Sillince 2011) due to cultural differences, hierarchies of decision-making, language issues, alignment with goals and objectives, unclear roles, and communication practices that may result from different understandings of what precisely a collaboration is and what it entails (Grossman et al. 2021; Sultan et al. 2023). Furthermore, team members often lack support, coordination, and cooperation and do not work well together to build collaboration or accomplish a task (James and Stanley 2024). Team creation is, therefore, more complex than simply assembling and assigning a group of individuals to a task (Szalados 2021). The science of team dynamics focuses on analysing the hidden influences that affect the interaction between team members and their leadership, as well as their behaviours and performance (Szalados 2021).

3.2.2.1 Distinguishing groups from teams

The distinction between teams and groups has been a subject of investigation in exploring the dynamics of collaboration within organisations. Researchers such as Szalados (2021), James and Bennett (2022), and James and Stanley (2024) offer nuanced definitions that underscore the interplay between individual objectives and collective efforts. According to Szalados

(2021) and James and Bennett (2022), groups are not necessarily considered as teams. Typically, groups consist of two or more individuals who have been unified by directives or social needs and who are working towards individual goals, while teams are a group of interdependent individuals who work together to accomplish a defined common purpose, goal, or mission (Szalados 2021). James and Stanley (2024, p.67) also defined a group as "a number of individuals assembled together or having some unifying relationship (e.g., members of a club). These are groups because all the various members are related in some way to one another because of their involvement in a certain endeavour." Similarly, in the EDs, teams are perceived as individuals who work collaboratively to achieve a common goal with a high degree of interdependence and shared responsibility (Johnston et al. 2016).

3.3 Teams and Teamwork in a Healthcare Setting

3.3.1 Teams in healthcare

The literature reports that several terminologies and labels describe healthcare teams (Nancarrow et al. 2013). For example, Xyrichis and Lowton (2008) described collaborative working arrangements using many different terms. In addition, the terms interdisciplinary, interprofessional, multi-professional, multidisciplinary, and transdisciplinary are often used interchangeably to describe teams and their processes (Payne 2000; Xyrichis and Lowton 2008; Reeves et al., 2010). It is also common to use them in conjunction with the term teamwork.

Nancarrow et al. (2012) proposed that the term 'interdisciplinary' refers to various professionals and non-professionals with a collective clinical purpose. Often, this term is used to describe the sharing of specialist knowledge in a collaboration process (Nancarrow et al. 2012). Each team member contributes their knowledge and skill set to augment and enhance the contributions of others (Flyvbjerg 2006; Nancarrow et al. 2012). In contrast, 'interprofessional' refers to roles, professional boundaries, and perceived unique contributions of individual professionals (Smith et al. 2012).

Interdisciplinary teams have been described as the cornerstone of medical care, enabling healthcare organisations to produce safe and effective care (Firth-Cozens 2001; Propp et al. 2010). A typical interdisciplinary team comprises physicians, nurses, pharmacists, social workers, therapists, administrators, and other allied health professionals from various backgrounds and specialities (Celona et al. 2018; Al Otaibi et al. 2022). These professionals

can also be found working in the healthcare facilities in the KSA (MOH 2021). In KSA, interdisciplinary teams were crucial in improving patient outcomes and staff satisfaction (Alyami 2021; Alanazi et al. 2022). Whenever healthcare professionals work together effectively, they can reduce patient complications and make fewer mistakes (Alyami 2021; Alanazi et al. 2022).

Every team member brings unique skills, expertise, and perspectives, contributing to a comprehensive understanding of patient needs. Interdisciplinary teams may differ based on the needs of the patients and the healthcare setting. For example, teams may include specialists for complex cases or focus on specific patient populations, such as children or the elderly (Al Otaibi et al. 2022). Moreover, this collective effort or type of teamwork is often observed in complex, high-acuity patient care environments such as the EDs (Celona et al. 2018; Putri 2013).

Throughout this thesis, the term 'interdisciplinary teamwork' has been used since the term appears to have some conceptual stability (Scott 2021) and, secondly, all healthcare team members, both professionals and non-health professionals, are involved in the current research since this reflects the everyday staff composition of the ED. However, where authors have used inter/multi-professional or inter/multi/trans-disciplinary terms, their original terms have been used.

3.3.2 Teamwork in healthcare

Healthcare delivery systems exemplify complex organisations, with teams and teamwork recognised as critical to organisational success (Weller et al. 2014; Anderson et al. 2021). Complex interactions in the sociotechnical care delivery system require reliable teamwork and collaboration to provide safe, high-quality care (Rosen et al., 2018). In the KSA, teamwork is acknowledged in the values and principles that govern the work of healthcare facilities (Haji 2023; Moussa et al. 2022).

In the healthcare field, there are a variety of definitions of teamwork. However, to avoid focusing on details or distracting from the main point of this research, a brief and introductory definition of terms and their meanings in the context of this thesis follows. The following is a well-known definition of teamwork in healthcare (Nancarrow et al. 2012; Franz et al. 2020; Lennox-Chhugani 2023). Teamwork is:

> a dynamic process involving two or more health professionals with complementary backgrounds and skills, sharing common health goals and exercising concerted physical and mental effort in assessing, planning, or evaluating patient care. This is accomplished through interdependent collaboration, open communication and shared decision-making. This in turn generates value-added patient, organisational and staff outcomes (Xyrichis and Ream 2008, p. 238).

Ream and Xyrichis (2008) outline a comprehensive definition that describes the dynamic of the healthcare teamwork process. Their definition involves complementary skills of healthcare professionals working together. This approach emphasises the need for continuous, dynamic interactions that integrate diverse expertise to improve patient care.

However, conflicting interests and varying communication styles can undermine teamwork (Dinh and Salas 2017; Zajac et al. 2021). Additionally, working with team members from different backgrounds can be challenging (Fleissig et al., 2006; Weller et al. 2014), particularly in healthcare (Weller et al. 2014; Anderson et al. 2021). Team members may work in different locations and at different times, and they may come from different professional backgrounds with varying levels of training, knowledge, attitudes, and expectations (Weller et al. 2014). The turnover of team members is high in some teams, and when combined with shift work, members do not always know one another or appreciate their colleagues' competencies (Anderson et al. 2021). Furthermore, power hierarchies within and between professions may prevent junior staff, or entire professional groups, from contributing fully as a team member.

In KSA, implementing interdisciplinary teamwork presents challenges that differ from those in Western countries (Alyami 2021). Gender segregation is an integral part of daily life for members of a team because the country’s hierarchical structure deeply ingrains gender differences (Alyami 2021). Men are placed in management positions at primary care centres, while women are placed in supportive positions. As a result, women are excluded from managing their teams of female members (Alyami 2021). Therefore, teamwork becomes significantly difficult. Thus, exploring interdisciplinary teamwork in other critical and unpredictable environments, such as the ED, will be crucial in understanding the current practice and the potential opportunities for improvement within the cultural and structural context of the KSA. However, not every team can be considered a real team. The following section differentiates between real teams and pseudo teams.

3.3.3 Distinguishing real teams from pseudo-teams in healthcare

The difference between real and pseudo teams is a notable debate in the literature. This differentiation is essential to understanding teamwork in healthcare settings (West and Lyubovnikova 2013; James and Bennett 2022). All teams may experience challenges hindering their effectiveness, but pseudo-teams emerge when essential aspects of teamwork are missing, resulting in an illusion of collaboration rather than actual interaction (West and Lyubovnikova 2013).

Pseudo-teams are often formed when healthcare providers lack reflection time, have unclear roles, and have ambiguous goals (West and Lyubovnikova 2013; Milton 2022). These conditions make it difficult for team members to communicate, coordinate, and make decisions effectively, compromising patient safety (West and Lyubovnikova 2013). There is a potential for healthcare teams to become pseudo-teams that are large, lack a requirement for interdependent working, fail to meet regularly, have limited interaction or communication and have few or no shared goals (James and Stanley 2024). As a result of a lack of interdependence, team members cannot collaborate effectively, resulting in fragmented care and a possible increase in medical errors (West and Lyubovnikova 2013).

James and Bennett (2022, p. 287) outlined the characteristics of real teams, they:

- Share values and aims
- Have regular performance reviews
- Develop strategies for improvement
- Provide psychological safety
- Establish climates and cultures of trust and mutual respect
- Are inclusive
- Are both inward and outward-looking
- Demonstrate shared leadership approaches

According to Lyubovnikova et al. (2015), being part of a real team in acute healthcare can have positive outcomes, such as fewer health professionals leaving an organisation, fewer adverse events reported, reduced work-related injuries, fewer sick leave days taken, and fewer harassment reports and violence. In contrast, pseudo-teams and how they function can pose a threat to patient safety and have been shown to increase patient mortality rates significantly (West et al. 2002; Lyubovnikova et al. 2015).

3.4 Interdisciplinary Teamwork in EDs

An ED is a fast-paced, unpredictable, and highly demanding environment (Grover et al. 2017). High-functioning EDs require teams of healthcare professionals to collaborate to deliver care to acutely ill and injured patients (Grover et al. 2017; Weaver et al. 2017; Driskell et al. 2018). Interdisciplinary teamwork is essential in emergency settings as medical care is increasingly specialised, and the skills are required to treat critically ill patients (Courtenay et al. 2013; Rehim et al. 2017).

In the EDs, interdisciplinary teams operate in a unique, high-stakes, fast-paced environment significantly different from general teamwork. While general teams may have a flexible timeline and clearly defined tasks (Schmutz et al. 2019), the ED team must function under unpredictable conditions, requiring timely decisions to ensure patient survival (Grover et al. 2017). Several scholars found implementing effective interdisciplinary teamwork in an ED difficult (Clark and Drinka 2000; Weller et al. 2014). Interdisciplinary teamwork is complex to implement because it results from healthcare professionals' training and education cultures. Each discipline has different values, beliefs, and attitudes. As a result of these disparities, healthcare professionals are trained to think critically only within their field of expertise and are unaware of other areas (Clark and Drinka 2000; Weller et al. 2014). These interdisciplinary challenges must be overcome, and communication and team coordination must be enhanced to enhance patient safety and efficient care delivery.

3.5 Models of Team Dynamics

Team dynamics refer to the unseen psychological forces that shape a team's behaviour and performance (Yardley 2014). The nature of a team's work, the personalities of its members, their relationships with others, and the surrounding environment shape these dynamics (Salas et al. 2015). Several team dynamics models describe the psychological aspects of group dynamics. The three most commonly used teamwork models are Tuckman’s stage model, Belbin Team Roles, and the conceptual framework for IPT that Reeves et al. (2010) developed.

3.5.1 Tuckman's stages of group development

Tuckman's stage model, introduced in 1965, includes the stages of group development: 1. Forming, 2. Storming, 3. Norming, 4. Performing, and 5. Adjourning (Tuckman 1965). The Tuckman model is considered the most referenced group development model in human

resource development (Bonebright 2010; Graham et al. 2017; Vaida and Șerban 2021). Tuckman's model offers a structured framework for understanding the stages that groups usually experience as they develop and progress (Jones 2019). It provides insights into the challenges and dynamics that can appear at each stage, allowing team leaders and members to anticipate and navigate potential barriers (Tuckman 1965).

During the initial formation stage (1), individuals who come together as a team seek to establish social and task structures to guide their interactions. As the team experiences challenges reaching a consensus and agreeing on a unified plan, the transition to the storming stage (2) occurs, where different members compete for influence and promote their ideas. The norming stage (3) is reached by resolving conflicts and reaching agreements, where norms are established to govern future interactions. In the performing stage (4), when these norms are ingrained, members work collaboratively and hold one another accountable to achieve common goals (Tuckman 1965).

Tuckman's model was expanded to include a final stage called adjourning, which signifies the end of the group's existence (Tuckman and Jensen 1977). As Natvig and Stark (2016, p. 678) observed, “During the adjourning stage, the group performs a self-evaluation and analysis and reviews the outcomes of the project. This stage may include separation anxiety and mourning as the project team disbands, as well as feelings of accomplishment that tasks were completed.”

Tuckman’s model emphasises the importance of creating social and task frameworks within a team to foster team development and unity. As the team progresses through Tuckman’s stages, members gradually develop trust, cohesion, and a shared sense of goals. This understanding empowers team leaders and members to establish a positive team atmosphere and strengthen relationships (Tripathy 2018; Aquino et al. 2022). However, failure to allow time for teams to develop leads to problems as teams are “thrown” together and expected to be at their peak performance at once (James and Stanley, 2024). The forming stage is an essential team-building component; nevertheless, it is too often overlooked (James and Stanley 2024).

Kutob and Alhothali (2020) applied Tuckman’s model to healthcare staff at King Abdullah Medical City departments during the development stages of team building. They found that collaboration, performance, and communication enhanced with the model, resulting in higher

productivity and successful outcomes. Concerning the current study, it is widely recognised that EDs are prone to high staff turnover (McDermid et al. 2020), which may impact the effectiveness of Tuckman's model, potentially leading to team members to continuously repeating the forming or storming stages. When new members join or familiar members leave, the team may need to re-establish roles, rebuild trust, and navigate conflicts (Yaghmaei et al. 2022). Building trust will take time to be developed (Yaghmaei et al. 2022; Dubé et al. 2021).

Moreover, in the KSA, healthcare team dynamics can be affected by gender segregation by making it more challenging to build initial trust, establish clear roles, and foster open communication between male and female team members (Al-Turki 2019; Alyami 2021). Due to this segregation, conflict resolution and applying the forming stage may be more challenging, as interactions are restricted between males and females in the KSA. Thus, in the ED in KSA, implementing Tuckman's model would require consideration of high staff turnover and gender segregation, which may impact its success.

3.5.2 Team Role Theory

Belbin Team Roles is a framework for understanding and managing team dynamics created by Meredith Belbin in the 1970s (Belbin 2015). This model is widely recognised and used in various fields, including healthcare, due to its simplicity and broad applicability (Gutiérrez et al. 2019; García-Ramírez 2021; Gudur et al. 2020; Boone et al. 2022). The Belbin Team Roles framework provides invaluable insights into building successful teams by outlining the importance of balancing team and function roles. It is, therefore, crucial to consider the interpersonal dynamics and interactions within the team and the specific skills and expertise required for a task or project (function roles) (Belbin 2012; Belbin 2015; Gudur et al. 2020). Identifying the different roles within a team, as outlined by Belbin (2012), allows teams to ensure that their members are diverse and bring complementary strengths and perspectives. A balanced team prevents any one role from dominating or being neglected, creating a more harmonious and effective working environment (Belbin 2012; Belbin 2015; Gudur et al. 2020). According to Belbin (2012; 2015), the framework is based on the idea that every individual in a team has their own set of strengths and weaknesses, which can be classified into one of nine team roles: plant, resource investigator, coordinator, shaper, monitor evaluator, implementer, teamworker, finisher, and specialist (Belbin 2015). The plant plays a crucial role in generating and implementing innovative ideas. Resource investigators are

experts at networking, finding opportunities, and promoting the ideas of others. A coordinator can discover and utilise individual talents to achieve group goals. The shapers of a team inspire determination and competitiveness. It is the monitor evaluators' role to contribute logical and analytical thinking to the decision-making process. In addition to putting ideas into action, implementers ensure they are practical and reliable. The teamworker fosters harmony within the team and values collaboration. Completer finishers pay attention to detail to guarantee high-quality results. Specialists provide technical expertise and guidance (Belbin 2015). Teams can optimise their performance and reach their goals by understanding these roles and their strengths and weaknesses (Belbin 2015).

Adamis et al. (2023) examined Belbin's team role theory in community mental health teams in Northwest Ireland. They found that teams with various roles were more effective, while those with missing or duplicated roles performed poorly. Adamis et al. (2023) demonstrated that applying this model improves the effectiveness of these healthcare teams. However, leadership in the team is not associated with a single role, and Belbin's view of the team's roles implies that the team's needs will determine the most appropriate leader at the right time (James and Bennett 2022). Having nine people perform each of the nine Belbin roles is unnecessary, but staff members must be aware of these roles and find ways to fulfil them (James and Bennett 2022). Staff members can assume multiple roles in small teams, but it is reasonable to expect different people to fulfil the same role in larger teams.

However, the EDs are unpredictable and fast-paced, requiring quick decisions and flexibility from everyone involved (Grover et al. 2017; Lapierre et al. 2019; Bearman et al. 2023). Belbin's model, which assigns specific roles to team members, may not be fully effective in such environments. Situations can change rapidly in the ED, requiring team members to shift roles quickly (Bearman et al. 2023). Teamwork must be flexible in these high-stress contexts (Wise et al. 2020). Moreover, due to overwhelming pressures in the ED, team roles need to be adaptable to each member's current state and needs, allowing everyone to perform at their best (Bearman et al. 2023). Although Belbin's model provides a valuable foundation for the team members, it needs to be adapted to meet the unpredictable nature of the ED, ensuring that each situation can be addressed appropriately.

3.5.3 Reeves et al.’s Conceptual Framework for Inter-Professional Teamwork

This conceptual framework aims to increase understanding of the nature and practices of IPT. This conceptual framework has significant implications for healthcare research (Reeves et al.

2010; Lapierre et al. 2019). Researchers can use the framework to explore the effectiveness of different approaches to IPT, as well as factors that influence their success (Reeves et al. 2010).

Reeves et al. (2010) identified core teamwork concepts such as team identity, clarity, interdependence, integration, and shared responsibility. They noted that team tasks were generally unpredictable, urgent and complex. Reeves et al. (2010) also indicated that collaboration was a looser form of interprofessional work. As opposed to teamwork, collaboration is less concerned with a shared identity and integration of individuals. However, it requires shared accountability between individuals, interdependence between individuals, and cooperation between individuals, which is similar to teamwork. Regarding shared identity, coordination is like teamwork as a form of interprofessional work. Integration and interdependence, however, are less important. Team tasks are more predictable, less urgent, and less complex than collaboration. Collaboration and coordination are similar in that they require some shared accountability between individuals and a clear understanding of roles and tasks (Reeves et al. 2010). In a networking relationship, shared team identities, clear responsibilities and goals, interdependence, integration, and shared responsibilities are less important. Also, tasks are less complex, less urgent, and more predictable (Reeves et al. 2010). Additionally, they argued that the contingency approach should reflect the variations in interprofessional work that can occur in different settings, such as operating rooms and general medical wards (Reeves et al. 2010).

However, Reeves et al. (2010) aimed to cut through the rhetoric currently associated with interprofessional teams to explore in some depth the many factors, elements, and concerns that affect how professionals interact. They examined various concepts and theories that can be helpful when understanding IPT, examined evidence regarding the effectiveness of interventions to promote teamwork, and discussed approaches to evaluating such interventions. These sources have enabled them to develop an interprofessional framework that includes several components into four domains: relational, processual, organisational, and contextual. (See Table 2 below).

Table 2 Reeves et al.'s Four Domains

Domain	Description
Relational factors	These refer to the interactions between team members, including professional power,

	hierarchy, socialisation, team composition, team roles and team processes. The relational domain is about factors that directly influence the relationships that professionals share, such as professional power and socialisation.
Processual factors	These include time and space, routines and rituals, information technology, unpredictability, urgency, complexity and task shifting. The processual domain focuses on the workflow and processes involved in IPT. This focus involves factors such as defining the allocation of roles, using standardised protocols and guidelines, and creating clear, effective care plans. These steps assist the team in operating smoothly and productively while ensuring everyone understands their responsibilities.
Organisational factors	These include factors that influence the local organisational environment in which the inter-professional team operates. This domain refers to the structures and processes within the healthcare organisation that support IPT. The domain includes factors such as organisational support, professional representation and fear of litigation. A supportive organisational culture is essential for successful IPT, as it provides the framework for effective collaboration and communication.
Contextual factors	These consider the broader social, cultural, and economic factors influencing IPT. This consideration includes factors such as the availability of resources, the political climate, and the social and cultural norms that shape healthcare practices. Understanding these contextual factors is essential for developing effective strategies for IPT that consider the unique challenges and opportunities of different healthcare settings.

Source: Reeves et al. 2010, pp. 70–89

Figure 2 below demonstrates how various factors affect interprofessional teamwork in distinct domains. Each factor is presented with bidirectional arrows, suggesting a dynamic relationship and the potential to facilitate or inhibit teamwork (Reeves et al. 2010).

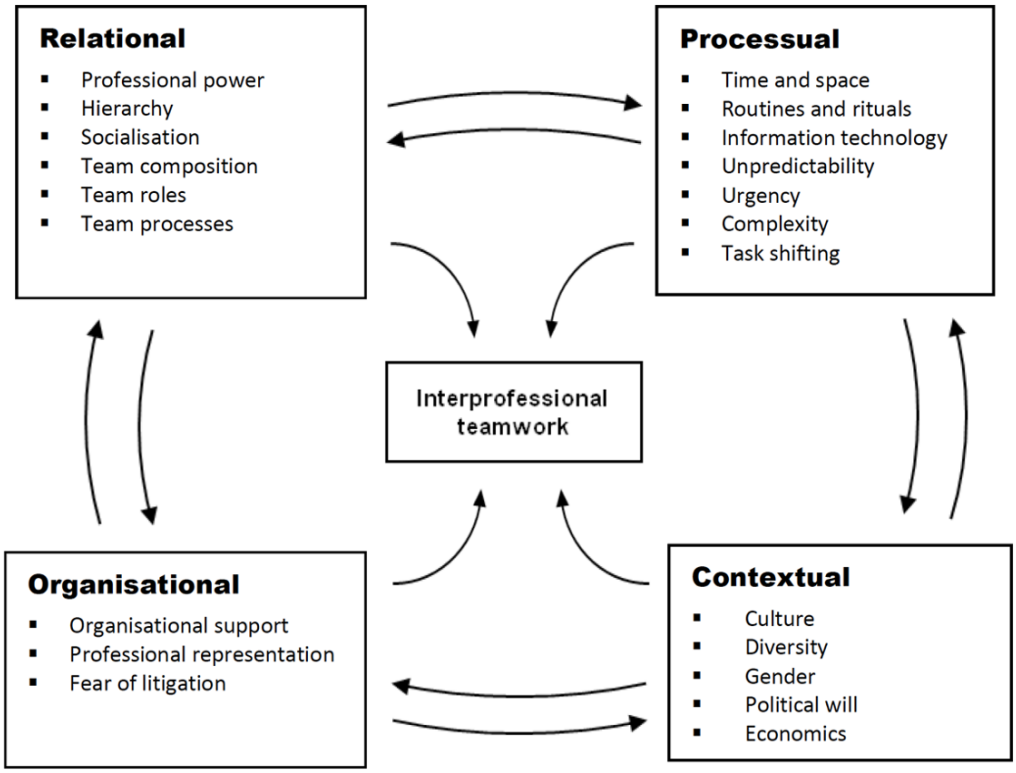


Figure 2 A framework for understanding IPT Source: Reeves et al. 2010, p. 71

Although the factors are grouped into four domains for simplicity, Reeves et al. (2010) highlight that some overlap occurs among them. This overlap indicates that the boundaries among the domains are not entirely rigid and that some factors may simultaneously influence multiple aspects of teamwork (Reeves et al. 2010). As the authors noted, the framework is not exhaustive and cannot cover all variables that may influence teamwork. However, it provides an overview of critical issues and offers a sociologically informed perspective on interprofessional teams, which has been largely absent from teamwork literature (Reeves et al. 2010).

3.5.3.1 Efforts to Validate Reeves et al.'s Framework

In 2017, Xyrichis et al. sought to validate Reeve et al.'s (2010) framework. This validation effort provides additional insights and empirical evidence that support its theoretical foundations and practical application in interprofessional settings (Xyrichis et al., 2017). Xyrichis et al. (2017) critically reviewed published studies from the previous decade to identify terms related to interprofessional work and assessed its categories (networking, teamwork, cooperation, and coordination) alongside the descriptions of interprofessional interventions in the included studies.

They found that Reeves et al.'s (2010) broad classifications oversimplify the complex dynamics within each concept. The two subcategories of consultative collaboration and collaborative partnership were added to cooperation to enhance the classification. For coordination, the three subcategories of coordinated collaboration, delegation coordination, and consultative coordination were included in the 2017 update (Xyrichis et al., 2017).

In addition to revisiting the different types of interprofessional work, Xyrichis et al. (2017) also evaluated the original definitions of the 2010 framework. These definitions proposed several dimensions for distinguishing between interprofessional working types: (1) shared commitment, (2) shared team identity, (3) clear goals, (4) clear roles and responsibilities, (5) interdependence among team members, and (6) integration of work practices. Based on their analysis, Xyrichis (2017) proposed a set of updates. They found all these dimensions useful in conceptualising interprofessional interventions, except for predictability, urgency, and complexity. They found that interventions differed but were not associated with specific interprofessional interventions. As a result, various kinds of interprofessional work can be used to accomplish similar tasks, some of which might be predictable, urgent or complex, and the same intervention can be used for tasks with varying predictability, urgency, and complexity. With healthcare delivery evolving and service delivery becoming more complicated, and illness patterns changing unpredictably, interprofessional activities must be able to deal with various tasks at different levels of predictability, complexity, and urgency (Xyrichis et al. 2017). According to the authors, future research must explore the combination of such task characteristics and the type of international activities.

Moreover, Xyrichis et al. (2017) found that interprofessional working was a heterogeneous concept that could be conceptualised differently. Several factors can influence how this work is perceived and defined, including the context, the number and types of professionals involved, and the kind of healthcare problems it intends to solve, as they all can influence how it is perceived and defined (Xyrichis et al. 2017).

However, there remain uncertainties regarding implementing these revised dimensions, particularly in diverse healthcare settings like healthcare in the KSA. Although the 2017 update simplifies dimension definitions, they may not be effective in real-world applications because of their adaptability across a wide range of situations (Xyrichis et al. 2017).

Xyrichis et al. (2017) also identified that the transitions between the framework's categories are inconstant, making applying the framework effectively in real-world healthcare settings challenging (Xyrichis et al. 2017). Although the framework lists several interprofessional concepts, such as teamwork and coordination, clarity is needed on how they relate to one another, especially concerning their implications for healthcare settings (Xyrichis et al. 2017). The 2017 update presented the InterProfessional Activity Classification Tool (InterPACT) to address this issue, categorising and defining interprofessional activities (Xyrichis et al., 2017). Although InterPACT was included in the 2017 version of Xyrichis et al. to improve clarity on interprofessional concepts, the framework still has difficulty integrating categories and providing helpful advice for various healthcare contexts.

The original framework also faced doubts regarding its generalisability due to the limited instances for validating its applicability (Xyrichis et al., 2017). The included studies do not capture the range of interprofessional activities, such as collaborative patient care and interdisciplinary communication, found in various healthcare systems, including EDs in KSA. Xyrichis et al.'s (2017) update acknowledged the ongoing nature of the conceptual framework validation and the need for more research to continually assess and refine its applicability.

Despite the 2017 version updating the concepts of the framework's categories, the 2010 framework's four domains (see Figure 2) have not been revised or modified. These four domains were examined by Lapierre et al. (2019). In their study, Lapierre et al. (2019) applied Reeves et al.'s (2010) framework to explore teamwork in emergency trauma care in Canada, focusing on its four domains. They found that the four framework domains were valuable for understanding factors influencing teamwork in trauma care. The team members consistently encountered the factors highlighted within the framework's four domains (Lapierre et al. 2019). However, it is still difficult to ensure that the framework is applicable in various organisational and cultural situations, such as the KSA (Al-Turki 2019; Alsadaan et al. 2021). Thus, a continuous validation procedure is needed to ensure the framework's applicability across various healthcare contexts. The following sections explore the concepts of leadership within teams.

3.6 Leadership Within Teams

The success of an interdisciplinary team depends on its leadership, with a leader providing supervision and support over personal development, facilitating goal setting, and evaluating

achievement (Nancarrow et al. 2013). Thus, exploring the role of leadership in teams is crucial.

3.6.1 Leadership

No common definition of leadership exists (Dugan 2017). However, leaders are often seen as influencing others' actions to achieve goals; they look beyond individuals alone at the overall process (Dugan 2017; Samarakoon 2019; Northouse 2021). Others view leadership as "a talent that each of us has and that can be learned, developed, and nurtured. Most importantly, it is not necessarily tied to a position of authority in an organisation" (Grossman and Valiga 2021, p. 18).

Many factors, including context, culture, situations, working environment, laws, and regulations, affect leadership (Amabile et al., 2004; Bindayel, 2022), so leadership styles and approaches may differ depending on the situation and context. Despite diverse leadership styles and approaches, the above definition focuses mainly on influence. Hospital leaders struggle to find an appropriate leadership style to address today's challenges (Joshi 2019). According to Joshi (2019), healthcare leaders should adopt different leadership styles based on the situation, task, and resources available. These concepts recognise leadership's complexity and multifaceted nature, including influence, collective processes, context, and adaptability.

3.6.2 Team leader

Team leadership is vital to effective teamwork and patient safety (AHRQ 2013). Leading is not an individual endeavour, and leaders need numerous skills to deal with team development, conflict resolution, clinical decision-making, innovation, and change management (Lateef 2018). Successful leaders gain a clear understanding of their values and beliefs, their strengths and weaknesses, and how to utilise team strengths (Dugan 2017). Leaders must possess the capability to recognise the strengths and limitations of their teams, as well as the ability to construct, develop, or maintain effective teams (James and Stanley 2024). Thus, a team leader should have "the ability to maximise the activities of team members by ensuring that team actions are understood, changes in information are shared, and team members have the necessary resources" (AHRQ 2013, p. 5). These characteristics emphasise the importance of optimising team activities, maintaining clear communication, and providing the necessary resources. Moreover, they focus on a leader's role in overseeing

and supporting team efforts. Nonetheless, these abilities might be improved if leadership responsibilities and skills included maintaining team morale and motivation, resolving conflicts, and adapting to changing circumstances (Rosenman et al. 2015; Lateef 2018).

Team success requires leaders, especially in high-pressure environments such as EDs. They set clear objectives and expectations to ensure everyone is on the same page and working effectively. This clarity allows the team to maintain focus and reduces confusion when every second counts (Dugan 2024; Carne et al. 2012).

Leaders are responsible for determining success in a team as they are expected to foster collaboration and trust among teams (Muda et al. 2016). Leaders can foster trust among team members by encouraging open communication, creating an environment that promotes a collaborative spirit, maintaining transparency, especially in problem-solving and decision-making processes, and acknowledging employee feedback (Salem et al. 2023). This means that leaders are expected to establish clear communication channels to enable team members to participate in critical decision-making processes, which is the basis for enhancing teamwork (Lateef 2018). However, encouraging such an environment in the high-pressure setting of the EDs poses unique challenges, such as maintaining orders in chaos and ensuring clear communication (Lateef 2018; Grover et al. 2017).

On the other hand, poor leadership, such as failing to allow sufficient autonomy, lacking inclusiveness, or failing to recognise team effort, can negatively affect job satisfaction and overall team performance (Crosbie 2006; James and Stanley 2022). Effective leaders balance staying in control and providing their team the opportunity to contribute, fostering a positive and productive environment where everyone feels appreciated (Ajeigbe et al. 2013). However, ED leaders face unique circumstances in their contexts. The following sections discuss leaders and leadership in EDs.

3.6.3 Leadership in ED teams

Leadership in the EDs is multifaceted and highly demanding, requiring clinical knowledge, administrative skills, and the ability to handle high-pressure situations (Lateef 2018). The skills needed for effective ED leadership include clinical expertise, communication, coordination, decision-making, and conflict resolution (Lateef 2018). In some countries, emergency physicians are considered the leaders in the EDs, are at the front lines, and are team influencers (Lateef 2018; Wilson et al. 2020). However, in other countries, nurses take

on this role (Husebø and Olsen 2019). Leaders in these contexts must be equipped with a deep understanding of various factors that influence the provision of emergency care, such as the complexity of patient interactions, the environment, and the healthcare systems' dynamic nature (Lateef 2018). The ED leader must organise tasks, manage team performance, facilitate team learning, and maintain interprofessional relations to be effective (Wilson et al. 2020). Moreover, ED leaders must remain calm under pressure and be flexible and adaptable to unpredictable circumstances (Wilson et al. 2020).

Moreover, emergency leaders provide care for the patients. Despite all the confusion and distractions, an emergency team leader must lead the ED through the chaos and manage patient after patient objectively (Lateef 2018). An emergency leader handles simultaneous emergencies with the oversight of a busy resuscitation room and simplifies an overwhelming (clinical) situation into systematic and manageable steps (Lateef 2018).

It is essential to identify the leader before beginning patient care to ensure that everyone knows who is in charge and what their responsibilities are. In emergencies, a team leader must hold a quick briefing to explain the plan and allocate tasks according to each member's abilities (Lateef 2018). After an emergency, leaders should conduct a debriefing session with the team to discuss the successes and weaknesses of the performance. Continuous feedback is essential to team development and emergency readiness (Martins et al. 2018). The ED leaders must excel in their clinical duties and guide their teams through the chaotic and unpredictable environment of EDs (Lateef 2018).

In KSA, physicians typically take charge of healthcare teams, while nurses follow their directions (Alasiri and Kalliecharan 2019). However, physician leaders face several potential weaknesses in their leadership roles. One issue is leadership training. Researchers worldwide, including the KSA, showed that team leaders often lack effective leadership training (McWalter et al. 2023; Grover et al. 2017; Husebø and Olsen 2019; Keshmiri and Moradi 2020). In KSA, as McWalter et al. (2023) emphasised, the lack of formal leadership training during medical education was one of the biggest challenges for physicians entering leadership positions. A second barrier that hinders physician leaders is time constraints. Clinical and administrative demands can leave them with insufficient time to devote to their leadership responsibilities. As a result, they may be unable to engage fully in strategic planning, team management, or personal development, affecting the overall performance and advancing healthcare services (Al-Nami and Khan 2023).

According to Abu Alsuood and Youde (2018), Saudi culture emphasises the importance of leaders helping their followers prioritise continuous improvement. Leaders are also expected to guide their followers rather than rely on an instructional approach (Sultan et al., 2023). The KSA's traditions will likely affect healthcare teams, including those dealing with emergencies (Sultan et al., 2023). In the KSA, Al-Ahmadi and AlKadri (2020) found that these challenges include a lack of gender diversity among individuals in leadership roles and the need to navigate cultural and social norms to build effective teams and communicate effectively with stakeholders.

3.6.4 The influence of leadership styles on team dynamics

Leadership styles are plentiful (James and Stanley 2024). However, certain styles significantly impact the team's interactions and performance in the EDs (Lahiri et al. 2021; Labrague 2024). For example, transformational leadership was an essential factor in improving teamwork effectiveness in the ED (Labrague 2024).

Burns (1978) first developed the transformational leadership theory, later advanced by Bass (1985). Transformational leadership is a cooperative process between leaders and followers, working together to establish a vision that motivates and guides change (Burns, 1978). Bass (1985) identified four transformational leadership behaviours to transform, inspire, and motivate followers: idealised influence, inspirational motivation, intellectual stimulation, and individual consideration. Additionally, transformational leaders encourage followers to use critical thinking, improving performance and promoting workplace change (Alshammari, 2014).

It has been shown that transformational leadership in the healthcare of the KSA increases staff nurses' job satisfaction, highlighting its potential for addressing the challenges in these units (Alrwili, 2022). Furthermore, the effects of nursing work environments on patient safety in the KSA hospitals highlight the need for effective leadership to ensure a safe and healthy work environment (AL-Dossary, 2022). Thus, the transformational style addresses each individual's needs, challenges them intellectually, and sets high expectations for personal growth and excellence in the KSA. However, transformational leaders have some limitations, as they are expected to display integrity and demonstrate behaviours aligned with their vision (Sosik et al. 2011). This does not guarantee that they will act unethically or in ways that serve their interests (Sosik et al. 2011) and a focus on vision over practical actions (Hutchinson and Jackson 2013).

Another relevant leadership style is authentic leadership. The authentic leadership theory was recognised during the research on transformational leadership theory but little articulated (Burns 1978; Bass 1990). Authentic leadership is conceived from the perspective of positive psychology (Walumbwa et al. 2008). Accordingly, Walumbwa et al. (2008, p. 94) defined authentic leadership as "a pattern of leader behavior that draws upon and promotes both positive psychological capacities and a positive ethical climate, to foster greater self-awareness, an internalised moral perspective, balanced processing of information, and relational transparency on the part of leaders working with followers, fostering positive self-development."

In this definition, authentic leadership has four key components: i) self-awareness, ii) relational transparency, iii) balanced processing, and iv) an internalised moral perspective. Leadership awareness refers to a leader's understanding of themselves, including their values, motives, the complex nature of their personalities, strengths, and weaknesses. Relational transparency refers to leaders who genuinely display themselves when interacting with others. Through self-regulation, leaders adopt internalised moral perspectives that guide them when faced with community and organisational pressures. As a result, leaders make decisions that align with their internalised values (Walumbwa et al. 2008).

As with servant leadership, authentic leadership emphasises the ethical perspective of leadership. However, authentic leadership is leader-focused, while servant leadership is follower-focused. Both theories, however, lack conceptual clarity about a common definition to determine the core dimensions of servant leadership (van Dierendonck 2011) and moral components of authentic leadership (Northouse 2013).

Authentic leadership, rooted in Islamic cultural values such as honesty, fairness, and justice, is crucial in the KSA's healthcare system for promoting trust and effective teamwork (Bahazar 2019). Studies show that such leadership enhances patient care quality and improves work environments, particularly in high-pressure settings like the ER (Alilyyani et al. 2018). In Saudi healthcare organisations, authentic leadership theory can increase leadership effectiveness and teamwork efficiency and ensure ethical, high-quality patient care (Alsalmi and Alilyyani 2023).

However, authentic leadership is not exempt from difficulties. Balancing transparency and authoritative decision-making is challenging, especially in critical healthcare situations where

rapid decisions require authority (Gardner et al., 2021). The following chapter, however, explores the relevance of research on the leadership styles to teamwork in the EDs.

3.7 Summary of the Chapter

This chapter has explored the concepts of team, teamwork, and leadership within teams in healthcare, particularly in the EDs, and discussed their relevance in the KSA context. This chapter has also illustrated the differences between real teams, which share goals and trust, while pseudo-teams often lack these concepts. Challenges such as communication breakdowns and role ambiguity were discussed, as well as the role of the leaders in guiding teams. In KSA, the role of interdisciplinary teams is critical in providing comprehensive care. In these teams, staff from various disciplines, such as physicians, nurses, allied health professionals, and administrative workers, collaborate to meet the needs of the patients in the country. Thus, fostering effective interdisciplinary teamwork is essential in a healthcare system characterised by cultural differences. The next chapter will review the literature on teamwork in EDs.

Chapter Four Literature Review

4.1 Introduction

This chapter presents a comprehensive overview of the approach employed to explore the literature and findings on teamwork in EDs. It begins by describing the methodology used for the literature review, which ensures a systematic review of existing research. The chapter then provides a comprehensive overview of the existing research, providing insight into ED teamwork practices. By critically analysing the literature, this chapter aims to reveal gaps in the current literature and identify areas where further research could improve teamwork in ED settings.

4.2 Method

This study employed a scoping review method after considering alternative review methods, including narrative and systematic reviews. Narrative reviews provide a descriptive and interpretive overview of current research on a particular topic (Magarey 2001; Stratton 2019). In general, these reviews provide an overview of the current understanding of the topic after summarising the findings of multiple studies (Stratton 2019). The narrative review method helps provide the personal views of experts on the subject and offers a general overview of a broad topic (Ferrari 2015; Magarey 2001). Arguably, traditional narrative reviews are subject to bias because the researchers are not always explicit about how they selected, analysed and interpreted the studies (Akobeng 2005).

Systematic reviews seek to reduce bias by utilising explicit and reproducible procedures (Magarey 2001; Gough et al. 2017). A systematic review approach was not adopted for this study as a single systematic review was inappropriate for addressing the review question, which is instead a broad review question (Munn et al. 2018). Scoping reviews are more appropriate for answering broad questions, such as the following two informing this study: 1) What is the existing evidence regarding teamwork in EDs? and 2) what gaps exist in the available literature, rather than more focused questions appropriate for systematic reviews (Armstrong et al. 2011: Munn et al. 2018; Kornas et al., 2016; Peters et al., 2015).

An initial review of the available literature found a lack of research regarding teamwork practices in EDs in the Saudi healthcare sector. Thus, this study used a scoping review to map and present evidence of teamwork practices in EDs worldwide (Levac et al. 2010).

A scoping review is a research synthesis that identifies crucial concepts, maps, and summarises a range of evidence to convey the breadth and depth of a research area (Levac et al. 2010). Scoping reviews have increasingly become a common approach to reviewing health research evidence (Levac et al. 2010). To this extent, the scoping review has a framework that contains five stages, as Table 3 below describes.

Table 3 Stages in a Scoping Review

Stage	Description
1. Identifying the study question	What is the existing evidence regarding the practice of teamwork in the EDs? What are the gaps existing in the available literature?
2. Identifying relevant studies	Searching within MEDLINE, EMBASE, CINAHL, Web of Science and Global Health, Applied Social Sciences Index Abstracts (ASSIA), Science Direct, and Web of Science. Pre-specified keywords; English language.
3. Study selection	Step 1: Title screening. Step 2: Title and abstract screening. Step 3: A full-text review.
4. Charting data	Step 1: Designing data extraction form. Step 2: Data collection. Step 3: Charting data. Step 4: Coding the themes
5. Collating, summarising and reporting	Step 1: Discussing Data. Step 2: Announcing the results.

Source: Arksey and O'Malley 2005, p.8

4.2.1 Stage 1. Review question

This study aimed to better understand how staff experience and perceive teamwork practices in an ED in KSA. Thus, this review addresses the critical question: What is the existing evidence regarding the practice of teamwork in the EDs? Following this, it seeks to determine gaps in the literature, setting the stage for further research that could enhance the efficacy and understanding of teamwork practices in the EDs.

Therefore, the research question for this review was based on a PCC strategy (P – Population; C – Concept; C – Context). The JBI guidance for Scoping Reviews recommended this strategy (The Joanna Briggs Institute 2015). Using the PPC strategy helps construct a review that provides the readers with important information about the review's focus and scope (The Joanna Briggs Institute 2015). Therefore, the key concepts were P – Healthcare providers; C – the practice of teamwork; C - The EDs in the hospitals.

4.2.2 Stage 2. Identification of relevant studies

The available literature about teamwork in EDs was initially explored in Google Scholar to gain a general view of what is known about the topic. The articles were then reviewed by title and abstract to find the leading journals and identify further keywords utilised in those references.

Following this, the literature search employed various online databases to obtain studies relating to ED teamwork, including Medline, Excerpta Medica Database (Embase), Applied Social Sciences Index Abstracts (ASSIA), ProQuest, Ovid Emcare, Web of Science, and Science Direct; these databases provided links to life science articles and contained studies related to the practice of teamwork in the EDs. Additionally, I reviewed the reference lists of the articles found to identify additional relevant articles.

Table 4 Search Terms

Summary of the keywords / Search terms	
PCC strategy	**Keyword/search terms**
1. Context	Emergency Department OR Emergency Room OR Emergency unit OR Accident & Emergency
AND	
2. Concepts	Teamwork OR Interprofessional team OR Interdisciplinary team or Multidisciplinary team OR Collaboration OR Patient care team OR Team leadership
AND	
3. Population	Healthcare staff OR Emergency staff OR Physicians OR Nurses OR Allied health professionals OR Administrative staff

4.2.3 Stage 3. Study selection

Duplicates were deleted using Zotero Reference Management Software (www. Zotero.com). Subsequently, the titles and abstracts of the studies were screened to identify relevant studies based on the following inclusion criteria:

1. The study focuses on teamwork in the ED.
2. The study was in the English Language.
3. The study was published between 2010 and 2024. The searches revealed that studies on teamwork in the ED were published beginning in 2010.
4. Open access to complete studies.

Original research papers and literature reviews were all included regardless of design. Studies were excluded if they:

- Focused on other health departments
- Were conducted in languages other than English
- Were undertaken in non-healthcare organisations.

4.2.4 Stage 4. Charting the data

The original electronic database search retrieved 6,605 results (Table 5 below). The total removal of duplications (n = 2,976) minimised the number of reviews to n = 3,629. Following a review of the titles and abstracts, 734 citations were found for further analysis. After a more detailed review, with whole papers assessed, 47 studies were identified as relevant.

Table 5 Results from Each Database

Sources Searched	Results
Medline	1,281
Embase	507
Global Health	106
ASSIA	2,028
Web of Science	2,466
Science Direct	217

The flow of studies through the review is depicted in the PRISMA Flow Diagram (Figure 3).

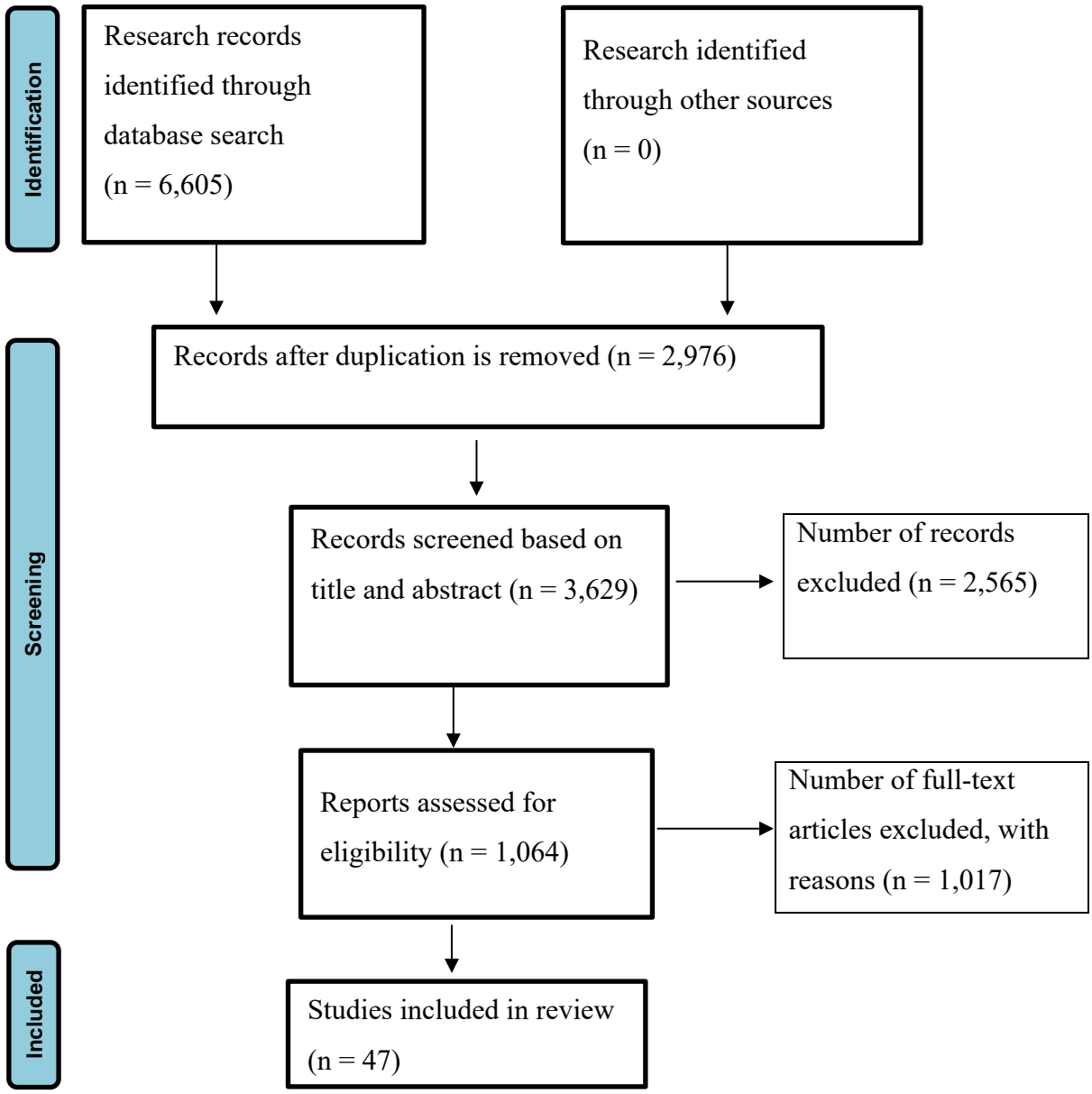


Figure 3 PRISMA Flow Diagram

Subsequently, data extraction for each study was undertaken. The information extracted from the selected papers (see Appendix 1) includes:

I. Authors and year of publication

II. Methodology and methods of the studies

III. Characteristics of the study population, such as sample size and the role of the participants

IV. Context including type (the EDs) and location of the study

V. The findings and the results of the studies

4.2.5 Stage 5. Results

The 47 studies originated from 13 countries. The majority (13) of the included papers originated from the US, 6 were published in Australia, five were from Sweden, four from each the KSA and the UK, three from Iran, two each from Norway, Canada, and the Philippines, and one from each Switzerland, Indonesia, China, and Hong Kong, this showed a lack of studies in the KSA as only four studies found as these studies did not provide in-depth about the barriers, enablers, or the skills needed for the ED teams. Moreover, most of the included literature represented nurses, followed by doctors, with a paucity of interdisciplinary members such as allied health professionals and administrative workers.

With regards to study designs of the included studies, a total of 18 studies employed a qualitative approach, including Grover et al. (2017), Lapierre et al. (2019), Khademian et al. (2013), Dreher-Hummel et al. (2021), Redley et al. (2017), Keshmiri and Moradi (2020), Gharaveis et al. (2023), Flowerdew et al. (2012), Horn et al. (2018), Hai-ping et al. (2020), Boiko et al. (2021), Mazzocato et al. (2011), Pun et al. (2015), Wise et al. (2022), Wise et al. (2021), Grover et al. (2017), Friberg et al. (2016), and Yaghmaei et al. (2022).

A quantitative approach was used for a total of 22 studies, including Weaver et al. (2017), Ajeigbe et al. (2013, 2014), Jones et al. (2013), Plummer and Copnell (2016), Obenrader et al. (2019), Liu et al. (2019), Athlin et al. (2013), Albrithen and Yalli (2015), Martin and Ciurzynski (2015), Bhanja et al. (2022), Donelan et al. (2020), Cant et al. (2016), Johnsen et al. (2017), Grimsley et al. (2021), Hayirli et al. (2022), Siassakos et al. (2011), Milton et al. (2022), Labrague (2024), Alsallum et al. (2019), Kalisch et al. (2010), and Alsalmi and Alilyyani (2023).

Four mixed methods design consisted of studies such as Sherman et al. (2020), Calder et al. (2017), Husebø and Olsen (2016), and James et al. (2022). Finally, the last three studies were literature reviews, including Kilner and Sheppard (2010), Ford et al. (2016), and Alasiri and Kalliecharan (2019).

The review findings from the above studies are discussed under three major themes: 1) the benefits of teamwork in EDs, 2) factors improving teamwork effectiveness in EDs, and 3) barriers affecting teamwork in EDs. These themes are discussed in detail below.

4.3 Themes of the Identified Studies

4.3.1 Theme one: The benefits of teamwork in EDs

Teamwork was described as an essential component of efficient and effective care delivery in EDs (Ajeigbe, 2012; Alsabri et al., 2020). An ED is considered a high-stress and fast-paced setting, where patients frequently present with complex and life-threatening conditions that require immediate care (Ajeigbe et al. 2014; Liu et al. 2019). Healthcare professionals must work together effectively to ensure patients receive timely and appropriate care to provide patient-centred and effective care (Patterson et al., 2013; Grover et al., 2017). These studies were collated into three sub-themes: 1) teamwork improves job satisfaction, 2) teamwork accelerates emergency services, and 3) teamwork reduces stress in the EDs.

4.3.1.1 Teamwork improves job satisfaction

Studies have shown that satisfied employees are happier with their jobs, enjoy their careers, have less burnout, and are less likely to leave the job (Ajeigbe et al. 2014; Lu et al. 2017). One element of providing an environment to promote satisfied employees is the practice of teamwork (Ajeigbe et al. 2014). Effective communication, quality of interactions, better work environment, social networking, trust among staff members, working towards common objectives, job satisfaction, job enjoyment, reduced burnout, and improved longevity resulted from effective teamwork practices (Ajeigbe et al. 2013).

In KSA, Alsallum et al. (2019) conducted a cross-sectional study examining how collaboration affected nurses' and physicians' work dynamics and patient outcomes in a teaching hospital in Jeddah city. Data were collected from 239 participants (169 nurses and 70 physicians) working in intensive care units (ICUs) and the ED. Alsallum et al. (2019) utilised t-tests, one-way ANOVA, and Pearson correlation to analyse the data and compare the attitudes of nurses and physicians regarding collaboration.

Alsallum et al. (2019) found that nurses had more positive attitudes about collaboration than physicians, with nurses scoring a mean of 3.68 compared to physicians' 3.4. Compared with the physicians, nurses had a significantly higher level of support for shared education (3.68

vs. 3.4, p = 0.02) and a higher level of support for nurse-physician collaboration (3.7 vs. 3.53). However, Alsallum et al. (2019) found that when nurses feel supported by collaboration, they are more likely to be satisfied with their work.

The study, however, has some limitations in terms of depth. Although it provided useful insights into nurses' and physicians' attitudes towards collaboration, it focused primarily on quantitative data without exploring the primary reasons in depth. Although the study found that nurses have a more positive attitude toward collaboration, it did not reveal the specific challenges or cultural factors that might explain physicians' lower scores (Alsallum et al. 2019). Further, teaching hospitals have a unique environment with medical students and residents, which can affect teamwork dynamics. For example, educators and new learners may all influence how teamwork is practised (Alsallum et al. 2019). Teamwork could be affected by operational challenges, resource availability, and staff dynamics at public hospitals. Thus, the attitudes and teamwork practices found in this study may differ from those in public hospitals.

Ajeigbe et al. (2014) assessed the effects of teamwork on staff job satisfaction in EDs in the US. The study employed a cross-sectional and quasi-interventional design to evaluate the outcomes of enhanced teamwork practices on staff job satisfaction. It compared EDs that adopted teamwork practices (interventional group) to those without such practices (control group). This study found that staff who worked in the interventional group EDs showed significantly higher levels of staff job satisfaction associated with improved teamwork practice ($p<0.0001$) than the staff who worked in the control group EDs, which did not practice teamwork (Ajeigbe et al. 2014). However, it should be noted that this only captured participants' responses at a point in time, which may mean that the data are not entirely trustworthy because their emotional state and circumstances at that point in time may have influenced their answers. Also, this study only investigated one concept, which was job satisfaction.

Similarly, Kalisch et al. (2010) conducted a cross-sectional study with a sample of 3,675 nurses in 80 departments in five hospitals in the US. The results of this study found that higher teamwork levels lead to greater job satisfaction, especially in an ED. The study's strengths lie in its large sample size of 3,675 participants and its use of a validated survey instrument, the Nursing Teamwork Survey (NTS), which showed adequate reliability (overall Cronbach's alpha = 0.94) and validity measures.

However, neither of these studies collected any qualitative data. More comprehensive details are needed to investigate specific factors impacting teamwork and job satisfaction in the EDs.

4.3.1.2 Teamwork accelerates emergency services

EDs are often crowded and overwhelmed, leading to long waiting times for patients needing care (Kulstad et al. 2010; Erenler et al. 2014). One primary reason behind these issues is ineffective working routines. Teamwork has been proposed as a promising solution to this problem (Kulstad et al. 2010; Grover et al. 2017; Horn et al. 2018).

Athlin et al. (2013) investigated the effects of teamwork on lead times and patient flow in a Swedish ED. The researchers introduced a multi-professional team responsible for the whole care process for a group of patients in the ED of a university hospital. Data were collected for five two-week periods over 1.5 years, using an ABAB design, where standard procedure (A) was altered weekly with teamwork (B), followed by three follow-ups. The outcomes measured were the number of patients handled within teamwork time, time to physician, total visit time, and the number of patients dealt with within the 4-hour target. The study found that the effect on lead times was only evident at the last follow-up, where the median time to physician significantly decreased by 11 minutes, the total visit time was significantly shorter, and the 4-hour target was met in 71% of patients compared to 59% in the control phase.

The study concluded that while teamwork contributes to quality improvement in emergency care, it may be insufficient to bring about more significant decreases in lead times or meet the 4-hour target in the ED. The study proved that introducing a multi-professional team responsible for the whole care process for a group of patients can contribute to quality improvement in emergency care by reducing lead times, shortening total visit time, and increasing the number of patients meeting the 4-hour target. However, the study was conducted in a single hospital in Sweden, which limits the generalisability of the findings to other ED settings and countries.

Liu et al.'s (2019) observational study compared interprofessional teams and fast-track streaming strategies for orthopaedic patients with limb injuries or back pain, the most frequent orthopaedic complaints in an ED. This study was conducted from May 2012 to November 2015 at an adult ED in Sweden. The outcomes measured were the time to physician (TTP) and LOS. The researchers found that the TTP for orthopaedic and non-orthopaedic presentations was significantly shorter during the teamwork period. During the

teamwork period, the median TTP was 70.0 minutes for orthopaedic presentations and 84.4 minutes for non-orthopaedic presentations, compared to 127.0 minutes and 114.0 minutes in the fast-track period, respectively. Orthopaedic presentations reduced median TTP more than non-orthopaedic presentations. Further, during the teamwork period, the median LOS for orthopaedic presentations was 217.0 minutes compared with 230.0 minutes in the fast track period (-13.0 minutes, 95% CI: -18.0 to -8.0) (Liu et al. 2019).

Based on these findings, Liu et al. (2019) proposed that interprofessional teamwork could be an alternative approach to improving patient flow in EDs. This study is significant because it provides evidence that interprofessional teamwork can improve patient flow in EDs. However, it only included orthopaedic patients with limb injuries or back pain, limiting the generalisability to other patient populations.

Both Liu et al. (2019) and Athlin et al. (2013) highlighted the potential benefits of teamwork in emergency care settings. Their studies showed that teamwork can enhance productivity, reduce waiting times, and improve patient outcomes by promoting collaboration and coordination among healthcare professionals.

Siassakos et al. (2011) investigated the relationship between generic teamwork skills and behaviours and team performance during simulated emergencies. They conducted a cross-sectional analysis of the randomised controlled trial data of the Simulation and Fire-drill Evaluation (SaFE). The study involved 140 healthcare professionals organised into 24 teams from six maternity units in Southwest England. Key outcome measures were the correlation of team performance (efficiency in conducting critical clinical actions, such as administering an essential drug, magnesium) and generic teamwork scores. The results showed a significant positive correlation between clinical efficiency and teamwork scores across all three dimensions: skills (Kendall's taub = 0.54, $p = 0.001$), behaviours (taub = 0.41, $p = 0.001$), and overall score (taub = 0.51, $p = 0.001$). Better teams administered provide magnesium faster (Mann–Whitney U, $p < 0.001$). The results suggested that the clinical conduct of a simulated emergency is strongly linked to generic measures of teamwork. However, the study did not provide detailed information regarding specific behaviours and teamwork skills practised in real-life situations rather than in simulated conditions. Further research is necessary to identify which aspects of teamwork are critical for team performance to develop better training programmes for multi-professional teamwork.

Grover et al. (2017) reported similar findings regarding timely care delivery and teamwork. They explored the perceptions, attitudes and experiences of teamwork of 12 emergency nurses in an Austrian ED. The study reported that teamwork improved patient outcomes. Working in teams improved efficiency and timeliness of care, which was especially important in emergency medicine, where multiple tasks must often be accomplished simultaneously. According to the study, teamwork made it possible to complete tasks such as assessment, vital signs, documentation, analgesia, and pathology three times faster, leading to increased patient reassurance. The study also found that effective team functioning was closely linked to workload management and planned care execution, improving patient outcomes (Grover et al. 2017). Similar findings across different studies and contexts suggest that teamwork is essential in emergency care and that efforts must be made to foster effective team functioning in this setting.

However, the studies above demonstrated that teamwork in the EDs can reduce wait times, improve patient flow, and improve the quality of care. Despite simulations and a small sample size, these studies provided valuable information about teamwork in real-world examples, and a larger sample size may provide more aspects not fully captured in these studies.

4.3.1.3 Teamwork reduces stress in EDs

EDs are considered stressful and unpredictable care settings with a risk of medical errors due to poor working conditions (Adriaenssens et al. 2011; Pun et al. 2017). Flowerdew et al. (2012) conducted a qualitative study to identify the major stressors for ED staff and examine the positive and negative behaviours associated with working under pressure in the UK. Semi-structured interviews were carried out with 22 staff members. Data were collected from staff working in the ED of a London teaching hospital. They found that the staff complained about significant stressors, including the 4-hour target to admit or discharge patients, excess workload, staff shortages, and poor teamwork within the ED and with inpatient staff. The participants also identified teamwork as a mediating factor between objective stress, such as workload and staffing and subjective experience. The study indicated that cooperation and avoiding conflicts with team members can prevent stress.

Although Flowerdew et al.'s (2012) study provided insights into the factors contributing to ED stress, it has several shortcomings. First, the sample represented the perspectives from one London ED; therefore, it is difficult to generalise the findings to other EDs. Second, they

did not disclose in depth what types of conflicts occurred among team members. Identifying more details about conflicts may help other EDs avoid and improve their teams' interactions. Third, they found that teamwork can reduce stress, but the exact type of team activities is unclear.

Horn et al. (2018) examined nurses' working environment experiences in an ED at a general hospital in the Philippines. This qualitative study employed semi-structured interviews with nine nurses at the ED. The study found that working in emergency care is stimulating, demanding, and challenging because of a stressful working environment with a high patient ratio and high workload within a hierarchical system. Horn et al. (2018) promoted the implementation of teamwork grounded in patient-centred care to overcome these challenges. This approach involves treating patients as equal partners in planning, developing, and assessing their care. By actively involving patients in the process, healthcare providers can achieve a more holistic understanding of their lives, decisions, and preferences, leading to a more comprehensive approach to healthcare. This holistic understanding is necessary to increase quality care and create a healthy work environment in an ED (Horn et al. 2018). However, this study was conducted in a single general hospital with a small sample in one country. Moreover, the Philippines has a different social structure, education system, and healthcare system that should be considered regarding the transferability of the study's findings.

4.3.2 Theme two: Factors improving teamwork effectiveness in EDs

To create a culture of collaboration among healthcare professionals, EDs must understand and implement the key factors that promote teamwork (Patterson et al. 2013; Alsabri et al. 2020). This theme presents studies that revealed factors that can contribute to creating effective teamwork in EDs. These factors were collated into eight sub-themes: the influence of leadership styles on team dynamics in the EDs; training improves teamwork in the EDs; the impact of team leadership on team dynamics during a crisis in the ED; factors strengthening trust within teamwork; ED's physical environment promotes teamwork; role clarity improves teamwork effectiveness; Shared Mental Models (SMMs) among team members improves teamwork; and pre-experiences enhance teamwork.

4.3.2.1 The influence of leadership styles on team dynamics in EDs

Grover et al. (2017) conducted a study to explore emergency nurses' perceptions, attitudes, and experiences regarding teamwork in an ED in Australia. Semi-structured interviews were conducted with 12 registered nurses, and thematic analysis was used to analyse the data. The study emphasised leadership's crucial role in maintaining team cohesion. The ED leader must be capable of delegating tasks efficiently, ensuring that all team members are informed and supported while maintaining an overview of the patient's care (Grover et al. 2017). The study found that when leadership is effective, teamwork is more productive, resulting in improved patient outcomes and higher job satisfaction among nurses. Based on the participants, leadership is key in guiding the team and providing confidence, particularly in stressful or complex situations (Grover et al. 2017).

In contrast, the study revealed that inadequate leadership can weaken teamwork, especially during high-pressure periods. A lack of effective leadership leads to poor communication and isolated team members, which leads to stress and poor performance. The study emphasises the need for training in non-technical skills such as leadership and communication to enhance teamwork in the ED (Grover et al. 2017).

A particular strength of the study is that it used a qualitative approach to better understand emergency nurses' lived experiences and perceptions of teamwork in the ED. However, the researchers (Grover et al. 2017) confirmed that exploring perspectives from a wide range of healthcare professionals could provide a more holistic understanding of how teamwork operates and how it can be improved across different roles.

Labrague (2024) conducted a study to examine the influence of transformational leadership (see section 3.12) on adverse patient outcomes and nurse-assessed quality of care in EDs, focusing on work satisfaction. This cross-sectional survey involved 283 ED nurses in the Philippines. The study found that nurses who viewed their leaders as transformational reported fewer adverse patient events and higher quality of care. According to the study, nurses in the EDs are more satisfied at work when they experience transformational leadership. Transformational leaders provided the nurses with support, guidance, and opportunities for professional growth, resulting in a sense of satisfaction which, in turn, fostered a sense of teamwork and collaboration and a supportive work culture where knowledge and best practices are exchanged, resulting in improved patient care (Labrague 2024). The study had a large sample size of 283 ER nurses, which enhances its reliability.

Despite this, there are several weaknesses, including using self-reported data, which may introduce bias, and the focus on nurses, which does not consider other staff members, such as allied health and other professionals.

Alsalmi and Alilyyani (2023) examined the impact of authentic leadership on stress and burnout among nurses in the EDs of KSA. They used a quantitative cross-sectional design involving 188 nurses from two Saudi hospitals. The study used standardised questionnaires to assess burnout, stress, and authentic leadership. This study found that nurses are less likely to experience stress and burnout when there is authentic leadership in the workplace, which leads to better health outcomes. This study also found that this style promotes a supportive and healthy work environment by exhibiting transparency, ethical behaviour, and balanced processing. As a result, nurses can build trust, communicate freely, and respect one another, which enhances teamwork (Alsalmi and Alilyyani 2023). Although the study had a large sample size, its cross-sectional design and focus on only nurses and two hospitals in the KSA limited its generalisability.

Ford et al. (2016) conducted a systematic review of literature from PubMed, concentrating on the impact of leadership and teamwork in trauma and resuscitation in the EDs. The review highlighted the need for both directive and empowering leadership styles in various scenarios in the EDs, emphasising the impact of different leadership styles on patient care. The directive leadership approach, in which the leader makes decisions and assigns tasks, can be effective when team members lack experience or the situation is severe. In high-stakes, time-sensitive environments, this approach ensures swift decision-making and a clear assignment of roles. Meanwhile, an empowering leadership approach involves delegating decision-making responsibilities to team members to coordinate and communicate. This is more effective when injury severity scores are low and team members are experienced. In complex situations, this approach enhances team engagement and facilitates adaptability and innovation (Ford et al. 2016). However, when leadership is directive, less experienced team members may become dependent on the leader, hindering their development (Post et al. 2022). Nevertheless, it must be acknowledged that the searches for this review were not comprehensive since only one database was used, and they focused only on trauma care in the ED. Further, the included studies did not clearly describe and validate the tools used to measure leadership effectiveness (Ford et al. 2016).

James et al.'s (2022) research focused on enhancing the “hot debrief” process (an immediate debriefing after a critical incident) in an ED of a UK hospital by adopting a collaborative and distributed leadership approach. This approach aimed to empower nurses to take on leading roles in these real-time debriefings conducted immediately after cardiac arrests. The study sought to reduce the cognitive load on physicians and foster a more inclusive team environment by including more team members in leadership roles. The study used a mixed-methods approach, employing surveys, semi-structured interviews, and four Plan-Do-Study-Act (PDSA) cycles to create, test, and refine a hot debrief tool tailored to the department’s needs.

The study found that distributed leadership significantly improved team dynamics by enhancing communication, promoting a culture of shared responsibility, and increasing engagement across multidisciplinary teams. Nurses became more engaged in the debriefing process, resulting in more frequent and effective debriefings. The study also revealed challenges, such as physicians’ resistance to the process, resulting in inconsistencies in its application (James et al. 2022). Physicians perceived the debriefs as an additional burden in such a stressful environment, thus making them unwilling to participate actively. However, the study found that distributed leadership can enhance teamwork in emergency settings without involving all team members, especially in a traditionally hierarchical environment such as the ED.

While the above studies provide valuable evidence of how leadership styles influence nursing staff, except for James, who included physicians, they did not recruit other ED professionals such as allied health professionals, administrative staff, or physicians.

4.3.2.2 The influence of team leadership on team dynamics during a crisis in EDs

In general, a crisis is a situation that develops rapidly and requires a response by someone or something to mitigate the consequences (Racaj 2016; Firestone 2020). In healthcare, crises occur in many forms, such as medical emergencies, infectious disease outbreaks (Smith et al. 2020), natural disasters, financial difficulties, legal and regulatory concerns, or patient safety concerns (Boin et al. 2018). Healthcare organisations must be prepared to handle these crises to safeguard patients and maintain operations (Hayirli et al. 2022).

During a crisis, the ability to make qualified decisions is essential (Bhanja et al. 2022). Many authors consider the ability to make fast, competent decisions a critical competency (Helsloot

and Groenendaal 2017; Boin et al. 2016). As a result of turbulence, leaders have less time to make decisions, less information is available, and there is a higher burden of decision-making (Van Knippenberg 2017).

Hayirli et al. (2022) explored the impact of leadership communication on burnout and teamwork among ED members during the coronavirus pandemic (COVID-19). In a survey of 635 California ED staff members conducted between October and December 2021, Hayirli et al. (2022) identified three key factors for effective communication: information flow, content consistency, and accessibility. Hayirli et al. (2022) found that these factors significantly influenced staff experiences. Easy access to information was found to reduce burnout and improve teamwork. This underscores the importance of how leaders deliver information to their staff, especially in high-stress situations such as a pandemic (Hayirli et al. 2022). However, although the study employed a large sample size, which enhanced the validity of the findings, the cross-sectional design only captures a snapshot in time. Consequently, it might not reflect the dynamic nature of the communication or the long-term effects that communication can have on burnout and teamwork (Hayirli et al. 2022). Despite these shortcomings, the study provides valuable insights into leadership communication during times of crisis, highlighting the importance of leaders in facilitating effective information sharing to support their teams.

Similarly, Bhanja et al. (2022) offered an in-depth review of how leadership and team dynamics impact burnout among ED employees across three different survey periods (between 2020 and 2021) during the crises of COVID-19. Bhanja et al. (2022) surveyed 944 participants over three waves, finding that median burnout scores had increased from 2.0 to 3.0.

The results showed that process clarity significantly reduced burnout odds from 0.36 to 0.24, joint problem-solving reduced it to 0.54, and leader inclusiveness reduced burnout odds from 0.45 to 0.41. With a focus on leader inclusiveness, process clarity and joint problem-solving, Bhanja et al. (2022) indicated that leadership behaviours are significantly associated with reduced burnout. It was identified that a leader who participates in effective communication creates an inclusive atmosphere and promotes collaborative problem-solving within their teams, effectively reducing burnout among team members, especially during crises.

In this study, Bhanja et al. (2022) followed how team dynamics change over time and how those changes impact burnout. Thus, the study's findings can be used to improve leadership

effectiveness to improve team members' well-being. However, several measures were self-reported in this study so that measurement errors could have affected the results (Bhanja et al. 2022). Moreover, during a pandemic, burnout and teamwork may vary daily, so a single time point may not represent an overarching feeling (Bhanja et al. 2022).

The studies above emphasised the importance of effective leadership in managing team dynamics and reducing burnout during healthcare crises. Their findings demonstrated leadership's ability to enhance team cohesion and well-being in the environments of the ED. These studies showed that crises test a leader's abilities to establish orders, allocate resources, and manage emotions in the EDs.

4.3.2.3 Factors strengthening trust within teamwork

Trust is vital in facilitating effective teamwork in EDs (Husebø and Olsen 2016). By building trust, ED teams can achieve better collaboration and communication, which improves interactions and patient care (Friberg et al. 2016). Husebø and Olsen (2016) conducted a study to investigate the impact of the Clinical Leadership in Teams (CLT) course (a programme designed to enhance non-technical leadership skills), which aimed to enhance trust through leadership development, role clarity, and collaborative decision-making. They utilised quantitative and qualitative methods to evaluate the CLT course, including patient surveys, ED databases, team observations, shadowing, and focus group interviews. The sample consisted of 12 nurses in charge, 40 doctors, 30 nurses, and 400 patients between December 2013 and September 2015 in a Norwegian hospital.

Husebø and Olsen's study revealed that trust was significantly developed by improving open dialogue (team members communicated freely), role clarity (team members understand their responsibilities), shared leadership (e.g., encouraging different professionals, such as nurses and doctors, to perform leadership roles according to the situation), and involving all members to participate in decision-making. Additionally, the study revealed that trust was essential for effective teamwork and improving patient outcomes, emphasising the importance of leadership training.

This study provided comprehensive insights by combining quantitative and qualitative data to improve the intervention. This study's design allowed real-time evaluation and adjustments, making it more relevant and applicable. However, evaluating the CLT course's effectiveness

was complicated because outside factors, such as organisational changes, staff turnover, or differences in workload, can impact the training and its outcomes (Husebø and Olsen 2016).

Furthermore, Friberg et al. (2016) reported other factors influencing team members' trust. Friberg et al. (2016) conducted a study to examine the interprofessional trust within a Norwegian ED. A total of 20 participants participated in this study, including 11 nurses in charge and 9 doctors on call. These staff members participated in four focus groups, with a few attending more than one.

Friberg et al. (2016) found that trust was built and developed through relational knowledge, such as understanding and respecting professional roles and expertise, as well as contextual support from the organisational system and clear systems. However, it is clear from the study that trust in EDs is dynamic and changeable. Building, maintaining, and challenging trust is often difficult because of the varying conditions, such as staff composition and workload. Friberg et al. (2016) concluded that interprofessional trust can be improved through strategic communication, mutual understanding, and organisational support, highlighting the importance of continuing interprofessional education.

The study of Friberg et al. (2016) applied focus groups, which enabled participants to share their perspectives openly, providing rich insights into relationship dynamics and organisational influences on trust. However, on-call doctors may not work consistently with the same team, making it difficult for them to develop long-term relationships and build trust like permanent staff do. Thus, their findings may not capture the deeper trust dynamics experienced by full-time employees.

The studies above showed that trust is fundamental to effective teamwork in EDs. These studies, however, did not fully consider the perspectives of all interdisciplinary team members who work in different roles. They could provide a comprehensive understanding of team dynamics and their impact on the overall functioning of EDs.

4.3.2.4 Training improves teamwork in EDs

Some researchers found that teamwork training can improve clinical team performance and patient health outcomes (Jones et al. 2013; Patterson et al. 2013). Jones et al. (2013) sought to determine whether teamwork training, such as Team Strategies and Tools to Enhance Performance and Patient Safety (Team STEPPS), promoted employees' perception of the culture of safety in an ED in the US. The study utilised a quantitative design to compare 70

staff members (physicians, nurses, and medical assistants) who received Team STEPPS training. Post-training perceptions were measured using the Agency for Healthcare Research and Quality (AHRQ) survey.

The study found that this training programme can improve staff perceptions related to a safety culture among the ED staff (Jones et al. 2013). The study argued that instilling teamwork skills improves staff's perception of safety. However, as the study was published in 2013, the article may have outdated information.

Similarly, Obenrader et al.'s (2019) study examined the perceptions of communication among ED team members in the US before and after implementing the Team STEPPS programme and tools. Obenrader et al.'s (2019) study applied a quality improvement project that trained 57 ED staff members (nurses, nurse practitioners, physician assistants, and non-licensed individuals who work within the department) utilising the TeamSTEPPS training programme. Forty-six participants completed assessments at all 3-time points (baseline, two weeks and one month): Team STEPPS Teamwork Perceptions and Attitudes Questionnaires and The Nursing Culture Assessment Tool. (NCAT). As a result of implementing Team STEPPS training in an ED, the emergency staff perceived that teamwork and communication developed (Obenrader et al. 2019).

Ajeigbe et al. (2013) conducted a comparative cross-sectional study in the US aimed at examining differences between staff in the interventional group EDs (IGEDs) and control group EDs (CGEDs). The study focused on the perception of job environment, autonomy, and control over practice by registered nurses (RN) and physicians (MDs) in EDs. The study involved eight EDs in California, classified into an Interventional Group of four EDs that underwent teamwork training and a Control Group of four EDs that did not. Four hundred ninety-eight staff members completed survey questionnaires, 191 from the Interventional Group and 307 from the Control Group.

The study found that the staff in the interventional group showed significant differences compared with those who worked in the control group regarding staff perception of job environment, autonomy, and control over practice (Ajeigbe et al. 2013). The results indicated that autonomy creates an effective working environment. The findings are a snapshot of the effect of RN/MD teamwork in the ED on staff outcomes of the interventional and control groups; therefore, a more in-depth investigation of the findings is necessary to comprehend their implications and nuances fully.

Furthermore, Cant et al. (2016) investigated the validity and feasibility of another team programme, the Team Emergency Assessment Measure (TEAMTM), for assessing real-world medical emergency teams' non-technical skills. The study involved 104 nurses and doctors in two hospital EDs in Australia. Over 10 months, multiple clinicians completed the TEAMTM instrument during medical emergencies.

Cant et al. (2016) found that across 80 real-world medical emergency team resuscitation episodes (283 clinician assessments), non-technical skills ratings averaged 89%. Twenty-one episodes were rated in the lowest quartile (i.e., 37 out of 44), indicating some performance challenges. Medical rates were significantly higher scores (mean: 41.1 ± 4.4) than RNs (38.7 ± 5.4) (P = 0.001). This difference was found in the leadership domain. The study found that higher leadership scores were associated with better overall team performance, emphasising the importance of effective leadership in emergency medicine. Cant et al. (2016) concluded that TEAM™ is a reliable and valid tool for training, supporting team performance through structured feedback and reflection during debriefings.

Although Cant et al.'s (2016) study provided quantitative data on the overall importance of skills needed, such as leadership, it did not provide in-depth or detailed information about the dynamics of teamwork and leadership skills within the ED.

Each study above showed the status of teamwork before and after teamwork training. All the studies concluded that teamwork training could improve the performance of clinical teams in the ED and patient health outcomes.

4.3.2.5 ED physical environment promotes teamwork

According to Weaver et al. (2017), using a shared care station in an ED has helped develop effective teamwork communication. They conducted a study to identify whether positioning the ED physicians, physician assistants, and nurse practitioners at the same workstations as registered nurses enhanced communication and teamwork. This study used a prospective, self-administered presurvey-post-survey using the TeamSTEPPS Teamwork Perceptions Questionnaire (TPQ) at two medical centres with similar staff pre-move and post-move but different ED designs in the US. In this study, 46 staff members, including MDs, physician assistants (Pas), nurse practitioners (NPs), and RNs, completed the presurvey and the postsurvey. The study found a significant improvement in the total TPQ scores (p = .0009) and four of the five components of the TPQ: team structure (p = .0283), situation monitoring

(p = .0006), mutual support (p = .0001), and communication (p = .0001). There was no alteration in the leadership element (p = .4519) (Weaver et al. 2017).

Weaver et al. (2017) revealed useful information about the physical placement of medical providers and RNs in EDs, which can increase communication and teamwork and improve patient outcomes. Nevertheless, this study has limitations, such as selecting the same staff members within the same hospital system, which may not be generalised to other staff members in different hospital systems. Also, this study did not cover staff demographics. For example, the selected members may have high-level education or be highly trained and understand how to interact with each other effectively. Training and education can be crucial in shaping employees' communication styles, problem-solving approaches, and overall teamwork dynamics (Obenrader et al. 2019). Individuals with a high level of education or training may possess a more comprehensive understanding of their roles and responsibilities (Cant et al. 2016).

Concerning the ED physical design, Gharaveis et al. (2023) examined how visibility in EDs can facilitate teamwork and reduce security risks, particularly from the perspective of nurses and physicians. Interviews with 17 nurses and physicians were conducted along with 48 hours of observation in five EDs in the US.

The observations allowed the researchers to see directly how visibility impacts teamwork in real-time. It was found that in the EDs, with a clear vision, team members were more cohesively, responding faster to threats and patient needs, whereas in areas with limited visibility, communication was slower, and responses were delayed (Gharaveis et al. 2023).

This study has a practical approach, observing and interviewing ED staff in real-life settings, making the findings relevant and useful. Nevertheless, a major weakness of the study is the small number of participants and the limited geographical areas, making the results not applicable to other EDs.

4.3.2.6 Role clarity improves teamwork effectiveness

Role clarity is essential to optimal team performance and patient care Khademian et al. (2013). Grimsley et al. (2021) examined team leadership dynamics and role clarity during paediatric cardiopulmonary (CPR) arrests in the ED. A retrospective video review approach was utilised to analyse the performance of the ED teams during the critical first five minutes following cardiac arrest in a tertiary paediatric hospital. This study systematically

documented vital medical equipment's pre-arrival preparations and readiness, emphasising the significance of proactive task management. The study noted that the team leader played a significant role in summarising patient care needs, prioritising tasks, and assigning roles for urgent activities such as airway management, intravenous access, and CPR (Grimsley et al. 2021). This demonstrated how clear leadership and role clarity can positively impact teamwork in emergencies (Grimsley et al. 2021).

Utilising video review in this study allowed for an effective assessment of team interactions and actions, capturing details that could be missed in real-time monitoring. However, the study population was limited to paediatric patients with out-of-hospital cardiac arrests who were pre-notified by EMS (Grimsley et al. 2021). As a result, their resuscitation leaders prepared the team and resuscitation room adequately before patient arrival. In this study, the researchers did not examine the status of leadership and teamwork when dealing with cases without previous notification (Grimsley et al. 2021).

Khademian et al. (2013) explored interprofessional teamwork in an Iranian ED. Eleven nurses and six supervisors in a newly established trauma centre's ED were interviewed. The main findings were that the effective presence of team members, which means the prompt and effective presence of team members and auxiliary personnel, was an essential aspect of teamwork. Also, the study found that role definition in a team means that team roles must be defined to ensure clear role boundaries and that each role complements the other, allowing maximum use of team capabilities. A further finding was that managerial measures can be taken to manage critical conditions in trauma EDs, including plans to deal with high patient volume and security. The last finding was that effective patient management was a primary goal for the ED teams, which involves holistic, prompt, and appropriate care that prioritises the patient's needs. According to the study, implementing its findings could improve the effectiveness of teamwork in the EDs by enhancing the quality of services and cooperation among the team members. This study is credible and reliable because it relies upon expert information and improves the evaluation of patient management to achieve the main goals. However, due to the small sample size, the findings may not be generalisable to other ED settings.

Donelan et al. (2020) analysed nurses' and physicians' perceived roles and responsibilities in emergency, trauma, critical, and intensive care. Donelan et al. (2020) used a mail survey with randomly selected physicians and nurses from across the U.S. working in emergency, trauma,

and critical care units. Eight hundred and fourteen medical professionals (351 nurses and 463 physicians) were selected from a mail survey using random samples of MDs and NPs drawn from national lists of clinicians in eligible specialities working in US ED, trauma, intensive, and ICU. Donelan et al. (2020) found that 55% of NPs and 82% of MDs confirmed that their personal role in their department was obvious ($p < .001$); 34% of MDs and 42% of NPs indicated that their department was an example of excellent teamwork among professionals ($p = 0.021$); 41% of MDs and 37% of NP clinicians ($p = 0.061$) agreed that their teams are prepared to provide outstanding care in a crisis or disaster. Perceived role clarity was significantly associated with improved perceptions of excellent teamwork and disaster readiness.

Although Donelan et al.'s (2020) results indicated that MDs and NPs who perceive their roles as clear would be more likely to experience excellence in their teamwork, all survey results are subject to item and response bias. As the study was based on self-reported data, nurses and physicians might be influenced by their beliefs, social expectations, and desire to answer positively (Donelan et al. 2020). In addition, further in-depth details about how the clear roles helped the staff members experience excellence in their teamwork were not illustrated.

The studies above indicated that clearly defined roles assist in optimising effective teamwork in the EDs. Moreover, understanding team roles can foster mutual respect and trust, enable effective communication, and prevent conflicts arising from unclear responsibilities, especially in the EDs (Grimsley et al. 2021; Donelan et al. 2020).

4.3.2.7 SMMs improve teamwork in EDs

SMM is a mental representation shared between team members of their work that emerges from their interaction at work (Johnsen et al. 2017; Wise et al. 2021; Calder et al. 2017). Team members who possess an SMM of events in the EDs, including their causes and how to respond properly, can anticipate future events (Johnsen et al. 2017), predict behaviour and communicate performance expectations (Wise et al. 2021). This review found that researchers such as Johnsen et al. (2017), Wise et al. (2021), and Calder et al. (2017) demonstrate how proactive actions within SMMs significantly improve team coordination and effectiveness in ED.

Johnsen et al. (2017) examined the dynamics of high-performing trauma teams, focusing particularly on the role of team leaders in encouraging SMMs in Norway. This study

highlights team leaders as enablers who significantly influence the efficiency and effectiveness of medical emergency responses. Johnsen et al. (2017) used video recordings of 27 trauma team leaders in simulated emergencies.

However, they found that team leaders who actively engage in SMM behaviours, such as proactive information sharing and support, have better results in simulated trauma scenarios. As a result, these leaders enhance team performance by facilitating seamless communication and coordination. Consequently, members can anticipate needs and adjust their actions in advance. Leading with a proactive approach not only strengthens the cohesion of a team but also improves the team's ability to handle complex medical emergencies.

Overall, this research supports integrating leadership training that emphasises the development of SMMs within the ED teams. When team leaders are trained to facilitate proactive communication and support, the emergency teams can achieve higher operational effectiveness (Johnsen et al. 2017).

A key strength of this study was its implementation of video analysis and expert evaluations to demonstrate the importance of SMMs in the ED team's performance. A detailed analysis revealed a significant correlation between proactive leadership behaviours and improved medical outcomes. However, the study's limitations include a focus on the behaviours of team leaders, overlooking how individual team member skills and interactions contribute to the team's effectiveness and the team leaders (Johnsen et al. 2017).

A study by Calder et al. (2017) aimed to reveal how teams communicate in the resuscitation area, specifically to evaluate an SMM and the information needed. They followed three methods to assess a resuscitation team’s communication at a tertiary care academic trauma centre in Canada: 1) interviews, 2) simulated resuscitation observations, and 3) live resuscitation observations. Eighteen resuscitation team members were interviewed about shared mental models, roles and goals of team members and procedural expectations. The research team divided integrated communicated information into six themes: 1) time (included time since last epinephrine, duration of cardiopulmonary resuscitation and frequency of blood pressure monitoring); 2) patient status (vital signs); 3) patient history (included allergy status, “down time” and mechanism of injury); 4) interventions; (included x-ray, computed tomography and bloodwork); 5) assistance and consultations; and 6) team members present (treatments such as intravenous access). The study found that resuscitation team members have an SMM in understanding each other’s roles and goals in resuscitation to

provide rapid, efficient, life-saving care with a need for overall situational awareness. The study identified clear information needs for resuscitation team members and prioritised team situational awareness. The findings can improve coordination among team members, leading to more efficient and effective resuscitation efforts. Overall, the study highlighted the importance of SMM and effective collaboration in successful teamwork.

However, this study was conducted at a single academic tertiary centre; thus, the findings may not apply to other public hospitals. In addition, because Calder et al. (2017) relied on volunteers for the interviews, there is a risk of self-selection bias, social desirability bias, and recall bias. Simulation observations included residents of diverse levels of training backgrounds, which may have impacted the flow and sequence of events. During the live observations, there was a risk of data loss due to the rapidity of case evolution and the complexity of team communication.

In 2021, Wise et al. reported similar findings regarding an SMM and understanding each other's roles and responsibilities, which was crucial in providing timely, quality patient care. Wise et al. (2021) sought to illustrate how the team mental model concept can enhance the understanding of team effectiveness in health care by exploring the knowledge that underpins it and the workplace conditions that support it in the Fast Track area of an ED in Australia. Twenty-nine ED clinicians (registered nurses, doctors and nurse practitioners) were interviewed.

The study found that the team members were remarkably consistent in describing the underlying knowledge and cognitive processes behind their teamwork behaviours, indicating that they shared a similar mental model. Specifically, they shared an understanding of task knowledge, which is the knowledge and skills required for each team member to perform their duties, team knowledge (such as understanding of each role's responsibilities), as well as individual team members' specific skills, team process (a shared understanding of how to provide the correct information, when to provide it and to whom,) and finally goal-related knowledge which means that delivering timely quality care to keep patients flowing safely through an ED.

The study revealed that the content of the ED team's mental model demonstrated that the knowledge the team used to coordinate its work was deeply embedded in the team's tasks as well as the context of the workplace. Further, the study indicated that a team's effectiveness is determined by how well team members coordinate and their ability to perform their roles

efficiently and effectively (Wise et al. 2021). However, because the study was conducted within the fast-track area of one metropolitan ED, the mental model and workplace conditions identified may not apply to other EDs.

In dynamic and critical settings such as the EDs, SMMs significantly enhance team effectiveness (Wise et al. 2021). An SMM is particularly useful in EDs, where staff must respond quickly and effectively to emergencies. As a result of SMMs, the ED staff are prepared to deal with emergencies proactively by understanding work processes and anticipated challenges. As a result of this proactive approach, team members can quickly adjust to evolving situations (Calder et al. 2017). Consequently, ED operations become more efficient, leading to better patient outcomes and more cohesive team dynamics (Calder et al. 2017).

The studies above demonstrated that developing SMMs is imperative for optimal communication, coordination, and teamwork in the EDs settings. Moreover, SMMs can enable team members to respond to emergencies proactively by understanding procedures and anticipated situations.

4.3.2.8 Prior work experiences enhance teamwork

Yaghmaei et al. (2022) highlighted that prior experience with teamwork is necessary before working in the ED as a team. They sought to explain novice nurses' challenges and experiences regarding teamwork in EDs in Iran. Yaghmaei et al. (2022) recruited eleven interviews with novice nurses working at the ED. By using thematic analysis, four themes emerged: 1) essential teamwork skills development, 2) contradictory relationships between team members, 3) unpleasant feelings and experiences, and 4) personal growth and maturation during teamwork (Yaghmaei et al. 2022).

The key result was that novice nurses can develop the personal qualities necessary for effective collaboration through teamwork experiences. These qualities include the ability to handle difficult emotions and navigate conflicting relationships within the team. While this can be a challenging experience, it can also lead to personal growth and maturity among novice nurses in the ED. Yaghmaei et al. (2022) also highlighted the importance of personal growth and teamwork experiences, which are needed before working with a team in the ED. However, the participants in the study may differ from other staff members across the world.

Different qualifications, skills, abilities, and characteristics may result in different perspectives and findings.

Plummer and Copnell 's (2016) comparative study investigated the attitudes of nurses and physicians towards collaboration in the ED in Indonesia. Data were collected from 47 nurses and 24 physicians in one of 25 general hospitals in Malang, Indonesia, using a modified Jefferson Scale of Attitude towards Physician-Nurse Collaboration. The results showed that emergency nurses had more positive attitudes towards collaboration than emergency physicians. The study also found that experience in the ED was significantly related to participants' attitudes towards collaboration. Plummer and Copnell (2016) suggested that improving inter-professional education and promoting teamwork experiences could help to enhance attitudes towards collaboration among healthcare providers, not just nurses and physicians. The study sheds light on those with the most ED experience, who may be more satisfied with the ED work environment, which was found to generate more positive attitudes among them.

Milton et al. (2022) analysed healthcare professionals' perceptions of critical incidents concerning the barriers and enablers of interprofessional teamwork in a high-risk context in the ED. Twenty-eight interviews were conducted with 7 physicians, 12 registered nurses, 7 nurse assistants, and 2 administrators. The main findings were that knowing clinical routines and mastering professional competence are two ways to describe the importance of professional experience. These findings had three subcategories. In the first subcategory, experience played a vital role in professional practice and how it affected patient care. Secondly, newly graduated healthcare professionals or in training are often inadequately prepared to work in an ED. Lastly, healthcare professionals from other units who worked irregular shifts in the ED may lack ED-specific skills, routines, and consistency, hindering team progress. Therefore, inexperienced team members are more likely to experience failures in teamwork, which can be crucial when specific professions must make decisions. In addition, frequent changes in healthcare professionals can undermine teamwork spirit and reduce trust in the team (Milton et al. 2022).

Milton et al. (2022) emphasised the importance of professional experience and how it impacts interprofessional collaboration. However, this study only investigated events that occurred during critical incidents during a specific period (May 2019–January 2020) that may not

apply to other different times. Furthermore, the study did not comprehensively view teamwork in the ED, as it focused only on critical incident cases.

4.3.3 Theme three: Barriers affecting teamwork in the EDs

Despite its importance, interprofessional teamwork can be a challenge, and many barriers can hinder effective teamwork between professionals (Lindqvist 2015). Healthcare organisations can develop strategies that promote effective teamwork and improve patient care by understanding team barriers. Each study related to this theme reported various barriers to practising teamwork in EDs. This theme is organised into four sub-themes: hierarchical influences on team performance, barriers influence team communication, and team coordination barriers.

4.3.3.1 Hierarchal influences on team performance

Hierarchy refers to vertical differences between members in their possession of socially valued resources (Hays and Bendersky 2015), a fundamental concept in the study of teams (Anderson and Brown 2010; Halevy et al. 2011; Greer et al. 2018). In an ED, a single clinician with a hierarchical authority typically leads interdisciplinary teams, including nurses, to provide urgent care and ensure that all members' efforts are aligned and coordinated, which is crucial when handling complex cases and emergencies (Hai-Ping et al. 2020).

Some studies have found issues with hierarchical structures in the EDs. For example, Hai-Ping et al. (2020) conducted a phenomenological study that explored how different cultural values are linked to teamwork between doctors and nurses in the ED in China. The researchers conducted in-depth interviews with 10 doctors and nurses at three large general hospitals.

Hai-Ping et al. (2020) found that the hospital hierarchy in Hong Kong's EDs causes issues, as junior doctors and nurses were nervous about asking for clarification or confirmation from senior clinicians who may not be approachable. This nervousness contributed to a lack of questioning and understanding, which impedes better decision-making. Junior clinicians may avoid seeking advice because of concerns about appearing weak or losing face in some cultures (Hai-Ping et al. 2020). Nurses were primarily responsible for carrying out doctors' orders in the department. As a result, nurses' suggestions and constructive feedback were

frequently disregarded, negatively impacting the quality of the hierarchy. The study indicated that understanding how the values of hierarchy affect teamwork can help healthcare leaders develop strategies to promote a positive and collaborative work environment, foster effective communication, and improve patient care in the EDs. However, as the study focused on a particular cultural context, its findings are unlikely to be generalisable to other cultures (Hai-Ping et al. 2020). Different cultures can hold different values, beliefs, and practices, significantly impacting teamwork and communication patterns within healthcare facilities (King et al. 2010; Shumba et al. 2017).

Similarly, Pun et al. (2015) examined clinicians' views of clinician-patient and clinician-clinician communication in a high-pressured trilingual ED in Hong Kong. Twenty-eight interviews with doctors and nurses in the ED were completed. Pun et al. (2015) found that the hospital hierarchy in Hong Kong's EDs causes issues as junior doctors and nurses are nervous about asking for clarification or confirmation from senior clinicians who may not be approachable. This inapproachability contributes to a lack of questioning and understanding, which impedes safe decision-making. Junior clinicians may avoid seeking advice since they may be perceived as weak or risk losing face (Pun et al. 2015).

This study provides valuable insights into clinicians' communication challenges in a high-pressure, trilingual ED in Hong Kong. However, focusing only on one ED may not adequately reflect the hierarchy challenges faced in other multicultural and multilingual EDs (Pun et al. 2015).

In KSA, Albrithen and Yalli (2015) conducted a study to determine social workers' difficulties when seeking to collaborate as part of a larger healthcare team. The study used a questionnaire to distribute 260 questionnaires to hospital social workers in western KSA, resulting in 219 reliable responses. A descriptive analysis was conducted, and Cronbach's alpha was used to measure internal reliability. Albrithen and Yalli (2015) found several challenges associated with interprofessional teamwork related to the hierarchical nature of professionals that placed authority with doctors. Due to this structure, social workers had difficulty expressing their opinions in teams. They also identified that cultural diversity poses an additional barrier in the context of doctors and nurses from Arabic and Asian countries, and their awareness of the role of non-medical professionals is limited. Moreover, a further obstacle to successful interprofessional teamwork is the absence of organisational support for effective collaboration between different professional groups (Albrithen and Yalli 2015).

However, Albrithen and Yalli's (2015) study only examined social workers' perceptions of their relationships with medical professionals, particularly physicians. It overlooked the interactions among social workers and other healthcare professionals, such as nurses, administrative workers, and allied health professionals. Including other professionals could provide a more comprehensive picture of teamwork as the current study seeks.

In addition, Alasiri and Kalliecharan (2019) examined clinical leadership in the KSA governmental hospitals. They examined secondary data sources and identified several factors hindering nurses' leadership abilities, such as weak nursing governance, low nurse involvement in decision-making at the national and organisational levels, and insufficient leadership development in nursing education programmes.

According to the study, the KSA's healthcare system has a hierarchical structure, where decision-making is often coordinated among physicians and administrators. This restricted the ability of nurses to participate in teamwork fully and limited their autonomy. Due to the hierarchical structure, nurses were often perceived as subordinates rather than equal healthcare team members (Alasiri and Kalliecharan 2019).

Nevertheless, the study relies on secondary data; it does not present new empirical evidence within the context of the KSA hospitals. Even though the sources of the study are credible, it might overlook the perspectives and experiences of the Saudi nurse and other staff members (Alasiri and Kalliecharan 2019).

According to the studies above, hierarchy can facilitate coordination and create conflicts that inhibit teamwork. Thus, ED settings and teams must be aware of the importance of the effects of hierarchy in optimising their interactions and performance.

4.3.3.2 Barriers influencing team communication

In the EDs, team communication appears to be a crucial competency (Martin and Ciurzynski 2015; Keshmiri and Moradi 2020; Daheshi et al. 2023). Providing timely and accurate diagnoses and treatments and ensuring patient safety requires effective communication among healthcare professionals (Alsabri et al. 2020). Communication is often difficult in the EDs, resulting in errors, delays, and even adverse events (Kilner and Sheppard 2010; Gharaveis et al. 2023). Understanding the factors that contribute to communication breakdowns to improve patient outcomes and enhance the quality of care in an ED is essential (Al-Shehri 2022).

Studies exploring factors that impact team communication in EDs reported different barriers. For example, Keshmiri and Moradi (2020) conducted a study that sought to explore the viewpoints of Iranian healthcare team directors regarding factors that are influential in leading an interprofessional team in an ED in Iran. A purposeful criterion sampling was used to interview 15 healthcare team directors, including 12 emergency medicine specialists and 3 nursing directors.

Keshmiri and Moradi (2020) revealed that unclear roles and lack of coordination, mainly related to weak leadership, create significant barriers to effective team communication in the EDs. When leaders fail to clarify roles and promote a collaborative environment, team members focus on their tasks rather than the common goals, resulting in miscommunication and team breakdown (Keshmiri and Moradi 2020).

In addition, ineffective leadership leaves staff unmotivated and overwhelmed by their workloads, reducing their ability to communicate effectively. The study indicated that effective leadership was crucial for overcoming these barriers by fostering clear communication, sharing feedback, and creating a cohesive team environment (Keshmiri and Moradi 2020).

Keshmiri and Moradi (2020) suggest providing targeted training programmes that improve leadership communication skills and enhance teamwork. In these programmes, leaders gain skills for delivering clear messages, providing constructive feedback, and maintaining open lines of communication (Keshmiri and Moradi 2020). However, even though the study included experienced ED directors who provided insights into the challenges of leading and communicating in the ED setting, it did not consider the viewpoints of other team members. The perspectives of ED directors may not represent the whole picture of interdisciplinary collaboration and leadership in the ED. Furthermore, the study was only conducted in Iran, so its findings may not apply to other countries with different healthcare systems.

Moreover, Sherman et al. (2020) sought to understand the perceived barriers to effective communication and teamwork among different disciplines which formed spontaneous resuscitation teams at a tertiary urban paediatric ED and to identify whether staff from different disciplines perceived these barriers differently. This study used survey questions to measure barriers and best practices within resuscitation teamwork, which was administered to staff among five roles: physicians, nurses, respiratory technicians, paediatric ED (PED) technicians, and PED pharmacists.

Sherman et al. (2020) found that all disciplines perceived communication, especially closed-loop communication (CLC), as lacking during resuscitations. CLC consists of three steps: 1) the transmitter sends a message to the intended receiver, using their name as much as possible; 2) the receiver accepts the message with a verbal acknowledgement of receipt, seeking clarification as needed; and 3) the original transmitter verifies that the message was received and correctly interpreted (Sherman et al. 2020). The study identified that CLC was not practised enough, and poor listening was also reported. In addition, all groups except physicians perceived ineffective communication by the team leader as a barrier to effective teamwork (Sherman et al. 2020).

Sherman et al.'s (2020) study was quantitative in design and did not explore the barriers the team members faced in great depth. This study was also conducted at one institution. Therefore, these perceived barriers to teamwork may be particular to this institution and are not generalisable. Although Sherman et al. (2020) did have a 62% response rate, many team members elected not to complete the surveys, subjecting the study to potential selection bias.

Bekkink et al. (2018) identified other barriers that impacted team communication. Their study was conducted at Massachusetts General and Brigham & Women's Hospitals in the US. It employed a focus group method involving 14 Emergency Medicine (EM) residents participating in four focus groups. The aims of the study were to 1) examine residents' views of the impacts of interprofessional (IP) communication based on experiences and observations in their workplace unit, 2) explore how residents were trained to work in IP collaborative practice, and 3) gather residents' suggestions for training in IP communication to address current needs. Their study found that the clinical learning environment poses significant challenges to IP communication, including time pressure hindering residents' abilities to communicate their thought processes behind requests and orders. Also, rapidly changing care teams diminish relationship building. In addition, the study found that residents reported that traditional hierarchical professional boundaries still exist, including hierarchies in various relationships, such as physician-nurse, inexperienced intern-experienced nurse, and nurse-medical student. An inexperienced intern working with an experienced nurse can be challenging for effective IP communication. The study also found that some residents perceived barriers to IP communication when they lacked knowledge in certain areas and were hesitant to express this.

However, Bekkink et al. (2018) only focused on residents; thus, the study's results may not be generalisable to other staff, such as nurses. In the KSA, physicians, nurses, allied health professionals, and administration staff control the ED services of public hospitals (Al Owad et al. 2018; MOH 2021), and the findings of Bekkink et al. (2018) could not be applied to those staff. In addition, this study only identifies the effects of interprofessional communication and does not investigate in depth the impacts they encounter when practising teamwork in ED. For example, barriers and enablers while collaborating or coordinating. These skills are substantial and contribute to providing quality care in healthcare settings (Wong et al. 2015; Keshmiri and Moradi 2020).

Lapierre et al. (2019) reported further factors impacting team communication. Their study aimed to understand interprofessional teamwork from the perspective of seven health staff in the ED care of polytrauma patients. Data were collected through interviews, observations, and group discussions. This study recruited seven healthcare professionals who work regularly in a trauma centre in Canada, including nurses, paramedics, emergency physicians, and respiratory therapists.

Lapierre et al.'s (2019) study found factors affecting the trauma team, such as emotional state, i.e., stress, fatigue, and distractions that affect teamwork performance and communication. Further, the study found that chaotic communication, which may occur in emergencies involving polytraumatic injuries, was reported as an impeding factor. For instance, when everyone is talking simultaneously, hearing instructions can sometimes be complicated (Lapierre et al. 2019). In addition, this study found that a lack of interpersonal relationships could result in poor interprofessional communication. For example, disrespect, absence of mutual help, and distrust are three components of negative interpersonal relationships (Lapierre et al. 2019). The study created an understanding of factors that impede teamwork in an ED.

Nevertheless, this study used a small sample size, which limits the transferability and validity of the results (Lapierre et al. 2019). In addition, the study focuses only on one aspect of IPT, namely ED care for the polytrauma team. Thus, the results may not be generalisable to other types of care, such as resuscitation or disease-related services.

However, poor communication during clinical handover significantly contributes to preventable health errors (Redley et al. 2017). A study by Redley et al. (2017) aimed to identify and describe the processes of interprofessional communication affecting the quality

of ED change-of-shift handovers. The data collection method involved observing 66 change-of-shift handovers at two hospital EDs in Australia. This study found four components of ED handover processes emerged, including 1) antecedents (the existing processes of how the organisation operates, as well as the surrounding circumstances and factors that influenced the chances of effective interprofessional communication to facilitate handovers during shift change); 2) behaviours and interactions; 3) content (the information communicated between clinicians at change-of-shift handovers); and 4) delegation of continuing care. Infrequent and ad hoc interprofessional communication and discipline-specific handover content and processes were identified as specific risks to patient safety during change-of-shift handovers (Redley et al. 2017).

In this study, three themes emerged related to risky and dynamic interprofessional communication practices in the four stages of ED handovers: 1) standard processes and practices, which indicated that in an ED, variability in processes and practices, such as limited familiarity with the routines and processes threatens effective communication between clinicians, 2) teamwork and interactions such as handovers between nurses in the ED consistently took place at the patient's bedside, which allowed for patients, their companions, and other healthcare professionals to participate in shift change discussions as well as ad hoc interprofessional interactions; and 3) communication activities and practices such as interruptions, distractions, disturbances in workflows, duplication of effort, and missing information resulted in decreased effectiveness of communication, work efficiency, and performance of staff members during interprofessional interactions (Redley et al. 2017).

This study is relevant because it sheds light on the factors contributing to ineffective communication. It provides insights for improving interprofessional communication during change-of-shift handovers in EDs, leading to better teamwork. Although efforts were made to minimise the influence, it is essential to acknowledge that participants could change their behaviour in response to being observed (Redley et al. 2017).

Kilner and Sheppard's (2010) systematic review described the role of teamwork and communication in the ED and its relevance to physiotherapy practice in the ED. The review discussed case studies that examine the communication loads of medical practitioners and nurses in EDs, demonstrating that ED staff are involved in communication events (80% of the observed time of the studies), with face-to-face conversations being the most common communication form. Multitasking and interruptions also contributed to high communication

loads. The review suggests that reducing the incidence of communication through staff education could decrease interruption rates and the potential for medical errors.

A key strength of this review was determining the role of communication and teamwork in reducing clinical errors and promoting patient safety. Professionals in emergency nursing published the review, which provides reliable information on communication in the ED. However, the review has weaknesses, such as focusing on physiotherapists in the EDs and excluding other professionals, such as nurses. Also, the study was published in 2010, which means the review contains old information.

Dreher-Hummel et al. (2021) conducted a qualitative study to explore emergency nurses' and physicians' experience of collaboration and collective decision-making during the triage of older patients in the ED in Canada. Semi-structured interviews were conducted with seven nurses and five physicians, and the transcripts were analysed via interpretive description. The investigation shed light on the collective decision-making experience of emergency nurses and physicians in ED's interprofessional team triage system. These researchers discovered that team members consistently adjusted and communicated their approaches to collaboration to arrive at favourable decisions. This procedure of negotiating collaboration was impacted by 1) individual preferences towards triage systems, which represented the differing opinions among team members about the effectiveness of the interprofessional team triage system; 2) individual role perceptions influenced negotiations, which occasionally led to conflict between nurses and physicians; and 3) the management of perceived time pressure and the personal strategies employed to handle this aspect, which is an inherent part of emergency care (Dreher-Hummel et al. 2021). The findings also highlighted the need to consider the values and beliefs of both professions when establishing a flexible approach to collaboration according to the patients' situations. This study highlights the value of effective communication and collaboration in team decision-making.

However, to improve team communication, Martin and Ciurzynski (2015) studied the implementation of the situation (what is happening with the patient), background (the clinical context and background), assessment (the problem as seen by the team member), and recommendation (how to correct the problem) (SBAR) framework strategy in a US paediatric ED. It sought to enhance communication among nurse practitioners and registered nurses by implementing a performance-improvement project involving structured processes such as joint patient evaluations and huddles (several face-to-face meetings are conducted throughout

the day to offer a summary of the huddles patients scheduled for that day and to review the work done on the previous day (AHRQ 2017). Their study used structured observation and pre- and post-implementation surveys to gather data from 32 nurses and 2 nurse practitioners. The results were measured according to several criteria: presence or absence of joint patient evaluation and SBAR-guided huddle, verbalisation of treatment plan, communication, teamwork, and the satisfaction of the nurses. The study found that implementing a joint patient evaluation and huddle structure with SBAR significantly improved communication and teamwork among the nursing staff. Eighty-three per cent of patient encounters included a joint evaluation, and a huddle structured with SBAR was conducted 86% of the time. Registered nurses and nurse practitioners verbalised patients' treatment plans in 89% and 97% of cases, respectively. Standardised tools and strategies, such as huddles and the SBAR communication framework, increased communication quality. Martin and Ciurzynski's (2015) study supports the effectiveness of these methods in improving communication and teamwork among nursing staff, which can lead to better patient care outcomes.

The studies above demonstrated that the context significantly impacts team communication and interactions. Cultural norms, healthcare systems, and approaches to teamwork differ from country to country, influencing how staff interact and collaborate. This highlights the importance of understanding a specific context when exploring or improving teamwork in the ED settings. Moreover, the studies did not explore barriers to effective team communication, such as language barriers and cultural differences in the EDs. Teams can improve communication by identifying and developing strategies to overcome these barriers.

4.3.3.3 Team coordination barriers

The delivery of emergency care requires the coordination of an interdisciplinary team (Wise et al. 2022). Effective coordination involves arranging and timing tasks to avoid delays, errors, and wasted energy (Wise et al. 2022). Coordination can occur when team members perform their roles effectively through verbal or written communication. In addition to individual coordination between team members (i.e., teamwork), top-down coordination is always needed, with a team leader overseeing the task list for the entire team (Wise et al. 2022).

Researchers (Wise et al. 2022) examined the complex dynamics of nurse coordinators within an Australian ED, particularly examining their interactions and coordination with physicians. Nineteen semi-structured interviews were conducted with registered nurses, physicians, and

nurse practitioners to analyse the leadership and team coordination challenges experienced in the EDs.

Wise et al. (2022) found that nurse coordinators could not effectively lead and synchronise the efforts of nurses and physicians due to unclear role definitions within a team and ambiguous authority. Leadership involves more than just managing tasks. It also involves encouraging strong communication and cooperation among all team members. Clarity in leadership roles, particularly the ability of nurse coordinators to act effectively in managing the day-to-day functions of the team, is crucial for improving the team's effectiveness and ensuring efficient patient care.

The study recommends clearly defining leadership roles and authority to address the critical question of "who leads" when coordinating daily tasks (Wise et al. 2022). As a result, coordination barriers could be reduced, and EDs would become more effective and responsive. The findings of Wise et al. (2022) are particularly useful for healthcare administrators seeking to enhance leadership structures and team coordination in high-pressure environments. However, this study overlooks the perspectives of allied health professionals and administrative workers. In addition, the study did not address structural or organisational issues that may impact leadership and role clarity, which could limit the generalisability of its findings (Wise et al. 2022).

In addition, Boiko et al. (2021) analysed broader interprofessional barriers, such as role substitution and oversight issues. Boiko et al. (2021) conducted a study to explore the role of interprofessional obstacles in patient flow management as perceived by the ED staff. Nineteen interviews were conducted with hospital staff in an acute tertiary trauma centre hospital in England. The study identified three major barriers. The first was substituting down, which determined that doctors frequently had to take on nursing tasks, and nurses had to perform various non-clinical activities outside their usual duties, such as finding space for patients in hallways when the ED was overcrowded. The second barrier was haphazard oversight, which indicated that the nurses in charge spent disproportionate amounts of time chasing doctors, patients, and support staff, causing frustration and impacting interprofessional interactions. Lastly, the study found that referrals were a barrier to collaboration.

Problems such as referral conflicts, managing complex cases, and interdisciplinary conflicts can affect collaboration between healthcare professionals. For example, when it is evident

that a patient needs admission, healthcare providers must distinguish between straightforward cases and those that require multidisciplinary treatment (Boiko et al. 2021). Unfortunately, this process can often lead to disagreements between healthcare professionals, leading to conflicts and difficulties in providing optimal patient care (Boiko et al. 2021).

Indeed, Boiko et al.'s (2021) study provides important insights into the barriers to interprofessional collaboration in patient flow management in an ED setting. The study's focus on the perspectives of ED staff helps identify the key challenges they face, which can inform efforts to improve patient care and team interactions. However, the study did not investigate to what extent interdisciplinary barriers are exacerbated by overcrowding and how differences in organisational aspects of flow management would affect the quality of relationships and team interactions. Further, the scope of the study data may be limited because staff were recruited from only one hospital, and the barriers may be ungeneralisable to other EDs.

Mazzocato et al.'s (2011) findings align with Boiko et al.'s (2021) regarding waiting for other team members or having trouble finding each other. Mazzocato et al. (2011) conducted a comparative study to utilise behaviour analysis to determine how teamwork plays out in practice qualitatively and to understand the eventual conflicts between the description in the planned teamwork process and actual behaviours. In this study, two sections of an ED implemented multi-professional teamwork involving changes in work processes, which aimed to increase inter-professional collaboration. The study was conducted in a Swedish university hospital ED, and the data were collected over three days of structured observations.

Mazzocato et al. (2011) found a significant discrepancy between the planned and the observed teamwork processes. Sixty per cent of the 44 team patients observed were managed only by the selected team members. In addition, only 36% of the observed patient care processes followed the planned teamwork approach from the start, which included healthcare providers collaborating to gather medical information. These findings indicated a potential absence of effective coordination to commit to the planned teamwork process.

Factors that decreased team coordination included waiting for other team members or having trouble finding each other. Completing work without delay and having an overview of the patient care procedure improved team behaviours. However, Mazzocato et al. (2011) addressed their aim, but it is unclear why team members were unavailable when their

colleagues attempted to contact them. Understanding the causes behind team members not collaborating could help avoid this inefficiency and improve team coordination in the future.

4.4 Summary of the Chapter

A comprehensive summary of the existing gaps in the literature was provided under the study's rationale. It is clear from this review that interdisciplinary teamwork is essential for the efficient operation and success of EDs. The studies also emphasise that understanding the experiences and perspectives of team members can provide deeper insights into teamwork in the EDs. In the EDs, teamwork leads to better patient outcomes, effective operations, and less stress for the ED staff members. All the studies have shown that working together efficiently reduces the time it takes to respond to emergencies, improves the quality of care, and fosters a supportive environment. In this review, several barriers and enablers were identified that significantly impact the effectiveness of teams. Barriers to collaborative decision-making include poor communication, complex hierarchical structures, and unclear roles that can lead to ineffective teamwork.

On the other hand, enablers such as trust and a clear definition of roles are crucial for effective teamwork in the EDs. The teams' dynamics cannot be shaped without effective leadership and effective communication. Leaders who establish clear goals and maintain effective communication help team members to utilise their skills effectively. The concept of SMM is also crucial as it ensures that every member is on the same page regarding the tasks to be completed, ultimately enhancing decision-making and performance.

However, a substantial gap exists in the literature regarding interdisciplinary teamwork in the EDs, particularly in the KSA. A notable lack of research explores how the KSA's unique context, cultural, organisational, and policy shape and influence the practice of teamwork. A detailed study of how leadership, communication practices, and interactions influence teamwork in Saudi EDs is needed. Thus, addressing this gap is crucial to improve healthcare in the KSA and to provide valuable examples for understanding teamwork dynamics in emergency care settings. Therefore, a qualitative case study design is ideal for investigating teamwork within an ED in the KSA. This method will allow an in-depth understanding of the influence of contextual factors, such as cultural, environmental, and organisational factors, on teamwork practices. The next chapter will discuss the methodology approaches in detail.

CHAPTER FIVE: Methodology

5.1 Introduction

This chapter describes the reasons for how and processes through which the research study was conducted. This will feature a discussion about the research paradigm and philosophical standpoint, which includes the ontological and epistemological standpoints associated with the study. This chapter also justifies adopting Reeves et al.'s (2010) conceptual framework and using a case-study methodology and how this was employed, including the sampling method, recruitment process, data collection and analysis methods, ethical considerations, and research rigour.

5.2 Research Paradigm and Philosophical Standpoint

Paradigms and associated philosophical beliefs influence every research study (Wahyuni 2012). Scotland (2012) defined a paradigm as the underlying beliefs that shape the development of theories in a specific field. The paradigm is significant because it influences the researcher's perspective and understanding of the world (Denzin and Lincoln 2011; Wahyuni 2012). A paradigm and the research questions guide the researcher in choosing the appropriate research methodology. A paradigm can encompass interrelated elements, such as epistemology, ontology, methodology, and methods, that provide a framework for conducting qualitative and quantitative research (Carter and Little 2007; Antwi and Hamza 2015; Rehman and Alharthi 2016).

Ontology refers to the fundamental nature of reality. It involves exploring whether reality exists independently, has an objective nature, or is subjective and a construct of an individual's cognitive processes (Burrell and Morgan 2017). Ontological assumptions refer to how individuals perceive the world; researchers should be able to formulate a clear and definite position or viewpoint (Alharahsheh and Pius 2020). Accordingly, ontology intends to understand the nature of what is considered real and whether it is an external truth or a result of personal perspective and interpretation.

Arguably, positivism and interpretivism are the two paradigms, but they exhibit fundamental differences in several ways (Alharahsheh and Pius 2020). These are also known as research philosophies (Easterby-Smith et al. 2012). These two viewpoints differ in their understanding of the reality of the social world. Positivism sees the social realm as a separate entity that can

be studied objectively through systematic methods instead of being shaped by subjective experiences and personal insights (Easterby-Smith et al. 2008; MacLeod et al. 2022). In the scientific field, positivists believe that knowledge must be based on quantifiable and observable data (Ijasan 2011). Usually, this viewpoint is combined with the ontological view that truth is external and objective (Nawi et al. 2012).

On the other hand, interpretivism aims to understand the subjective world of human experience (Goodsell 2013; Lincoln and Guba 1985). It attempts to understand a person's experiences or perspectives and interpret what that individual is thinking and what the context means to them (Kivunja and Kuyini 2017). Interpretivism aims to understand how individuals perceive the world, providing a comprehensive and context-based view (Bogdan and Biklen 1997; Kivunja and Kuyini 2017). Bowling (2014) and Broom and Willis (2007) explained that the interpretivist philosophical stance seeks to understand participants and explore what is in their minds using qualitative methodologies. Since the current study aims to examine the practices of teamwork from the perspectives and experiences of ED staff, an interpretivist philosophical stance was adopted to enable me to build a deep understanding of the perspectives and experiences of ED staff towards the practice of teamwork and interactions in KSA.

As Moon and Blackman (2014) described, the epistemological approach emphasises the characteristics and structure of knowledge. According to Scotland (2012), epistemological assumptions refer to assumptions about the methods of generating, acquiring, maintaining, and communicating knowledge. Accordingly, epistemology focuses on how a researcher seeks knowledge to reach reality, distinguishes right from wrong, and views the world around them (Moon and Blackman, 2014). Consequently, epistemological assumptions are considered vital since they influence how researchers organise their research and deal with issues like validity, scope, and methods of acquiring knowledge, how to produce or obtain knowledge, and determining to what extent it is applicable (Saunders et al. 2009; Tubey et al. 2015).

The current study's epistemology uses a case-study approach with different qualitative methods to capture people’s understanding and experiences of teamwork. This study's epistemological viewpoint underlines the importance of understanding the nature of knowledge and how it is acquired to design a research study appropriate for exploring the research aim and objectives.

Lastly, the methodology refers to the overall research strategy to accomplish the research, identifying the methods employed in line with the outlined research plan (Scotland, 2012). Some commonly used research methodology types include quantitative, qualitative, and mixed methods (Kumar 2018).

5.3 Choosing a Qualitative Approach

This study sought to gain insights into the ED staff's perceptions and experiences about the practice of teamwork in EDs. Hence, qualitative research was the appropriate approach as it provides detailed information about a specific area, gives insight into individuals' experiences, and assists in evaluating service provision (Grbich 2013; Pathak et al. 2013).

Boodhoo and Purmessur (2009, p. 6) described qualitative research as "a more realistic feel of the world that cannot be experienced in the numerical data and statistical analysis used in quantitative research." A qualitative method could be defined as a technique of inquiry that explores the meaning that individuals or groups ascribe to a social problem (Flick 2008; Creswell 2014). Researchers collect data in natural settings where people live or work to gain an understanding of the health behaviours in their social contexts. A quantitative approach was inappropriate for this study, as I sought detailed information about ED staff perceptions and experiences regarding teamwork, whereas quantitative techniques primarily depend on numerical data. As a result, a qualitative approach was used to gain in-depth information from participants in the current study (Ritchie and Lewis 2003; Creswell 2014).

The literature on teamwork in healthcare demonstrated the strengths of both qualitative and quantitative approaches. The quantitative method is appropriate for measuring team performance, effectiveness, and the relationship between team characteristics and outcomes (Plummer and Copnell 2016; Weaver et al. 2017; Donelan et al. 2020). On the other hand, a qualitative method provides a deeper understanding of teamwork and its cultural context (Alyami 2021). This approach helps explore how team members experience collaboration and examine complex aspects, such as interdisciplinary teamwork, which quantitative methods may overlook (Grover et al. 2017; Alyami 2021; Lapierre et al. 2019). Moreover, the interdisciplinary team comprises various professional groups with different definitions and interpretations of reality. Therefore, a multiple-viewpoint approach to research is needed to capture these varied perspectives (McNulty and Ferlie 2002; Alyami 2021). Thus, the current study seeks to depend on these insights by employing a qualitative approach to explore the diverse experiences of interdisciplinary teams in the ED of KSA.

Several methodologies are available in qualitative research, such as ethnography, grounded theory, case studies, and phenomenology (Saunders et al. 2009; Creswell 2018). Despite their common overarching goal of understanding human experience from various perspectives, these approaches differ in focus (Polit and Beck 2017). The following sections explain the case study design approach and why it was the most appropriate way to address the present study's aims and objectives.

5.4 Qualitative Case Study Design

The case study technique is advantageous when there is a need to gain an in-depth assessment of an issue, event or phenomenon of interest in its natural, real-life context (Avery et al. 2011; Merriam and Tisdell 2015; Yin 2018). A deep data analysis can provide rich details and insights that a broader survey would miss (Yin 2018).

Several scholars have defined a qualitative case study. For example, Baxter and Jack (2008, p. 544) described it as "an approach to research that facilitates exploration of a phenomenon within its context using various data sources. The diversity of definitions means that the issue is not explored through one lens, but rather a variety of lenses, which allows for multiple facets of the phenomenon to be revealed and understood." Stake (1995, p. 237) defined the case study methodology as "both the process of learning about the case and the product of our learning." Yin (2009, p. 18) defined the case study technique in the following way. "A case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident."

The above definitions of the case study approach all highlight the importance of investigating a phenomenon in depth within its natural context employing multiple data sources. This approach explores the phenomenon from multiple perspectives, allowing a comprehensive understanding of its multiple aspects. Further, case studies allow researchers to gain a deeper understanding of the case and the learning process, allowing them to generate insights and gain an understanding of complex issues and phenomena.

Yin (2003) and Ebneyamini and Sadeghi Moghadam (2018) suggest that a case study methodology is an empirical inquiry investigating the boundaries between the phenomenon and ambiguous context. As the boundaries between the phenomenon (teamwork) and context (ED) are still unknown or unclear in KSA, a case study design seemed appropriate to gain

insight into teamwork in the ED. This indicates that understanding the context is essential for a case study as it offers the crucial background and environmental elements that influence the investigated phenomenon (Yin 2014). Similarly, this concept is critical in the literature on interdisciplinary teamwork within healthcare and in the literature on teamwork more generally (Alyami 2021).

Critical studies have emphasised the importance of context in understanding how interdisciplinary teams function, how they are implemented, and how they affect individuals and organisations (Carter et al. 2017; Aase et al. 2014; Alyami 2021). Contextual studies have examined differences in meaning, structure, and effects of teamwork, particularly interdisciplinary teamwork, in different countries, sectors, and organisations of various sizes. All these studies recognise that understanding the nature of teamwork cannot be achieved without paying close attention to teamwork contexts. Analysing context can provide rich empirical insight into teamwork operations and advance the conceptual and theoretical understanding of the operation of teams (West and Lyubovnikova 2013; Alyami 2021). This recognition is directly related to case study design, which emphasises the importance of a deep understanding of the context (Yin 2009).

The KSA context is highly individual and specific (Alyami 2021). While there have been studies of teamwork in healthcare, none have addressed the unique nature of interdisciplinary teamwork practice when gender segregation is prevalent in both work and societal norms in the EDs. Gender segregation is a significant aspect of the context, offering a new lens through which the perception and reality of interdisciplinary teamwork can be explored. Additionally, the diversity of employees in KSA can also influence team dynamics, which may negatively affect communication, teamwork, and among team members (Al-Turki 2019). Thus, a case study approach is appropriate for allowing a researcher to explore the context in depth (Yin 2009).

Case studies are beneficial when implementing policy changes within complex real-world situations (Keen and Packwood 2000; Yin 2009). Real-world situations are especially relevant to this study, as, under Saudi Vision 2030, the country tends to encourage gender inclusivity in various sectors, including healthcare. Inclusivity is a significant policy change in the country because it aims to transform traditional norms and practices, promoting an environment where both genders can work together. A further change for Saudi Vision 2030 is the goal of treating more patients within four hours of their arrival in the EDs. Research has

demonstrated that effective teamwork can increase the speed of emergency services, thus reducing waiting times (Grover et al. 2017). Thus, the case study is crucial to provide an in-depth understanding of the status of interdisciplinary interactions and the policy changes in the ED (Saudi Vision 2030).

Regarding staff perceptions, researchers use a case study approach to gain an in-depth understanding of nuanced perspectives and team dynamics, illustrating the complexity of organisational culture and practical challenges (Baxter and Brumfitt 2008; Al-Turki 2019; Alyami 2021; Muhanna 2021). Following these steps, this thesis will benefit from a case study to provide rich, contextual insights that can reveal the current realities of teamwork, improve team performance, and improve patient outcomes.

In conducting case study research, the research question needs to include “where,” “how,” “what” and “why” (Yin 2018). By utilising this comprehensive approach, the investigation can cover all relevant elements of the phenomena. For the current research, the research question is: What are the perspectives and experiences of ED staff regarding the practice of teamwork in the ED of the New Hospital (pseudonym) in the Northern Borders region of the KSA? This question aims to generate detailed reflections from the ED staff, thoroughly exploring their perspectives and experiences with teamwork in their particular setting.

A case study is helpful for contemporary events (Yin 2009, p. 20). Exploring teamwork in the KSA and analysing it as a contemporary phenomenon requires an examination of current teamwork practices, influences of culture, the impact of the workplace, and the challenges that teams face today in the country. This examination facilitates understanding current realities and nuances of teamwork in the KSA's unique cultural and social context.

5.4.1 The power of a case study

Yin (2014) provided a significant amount of information on case study design and was used as the appropriate author to justify using the case study as the research design. Yin (2014) has conducted extensive qualitative research over a long period. Yin (2013) argues strongly for the power of case studies as a research methodology. Particularly, Yin highlights the capability of case studies to answer a research question and explore “why” and “how” questions. Yin also indicated that the more the questions seek to explain some present circumstance (e.g., how and why some social phenomenon works), the more relevant case

study research is (Yin 2013). Answering how and why questions assist in establishing causality in a root cause analysis process (Grobler et al. 2010).

Based on Yin's (2009) and Quintão et al.'s (2020) argument, case studies are needed in most fields to understand complex social phenomena. The case study research method offers great strength in investigating units consisting of several variables of potential importance. It enables investigators to retain a holistic view of real-life events, such as individual life cycles, small group behaviour, organisational and managerial processes, neighbourhood change, school performance, international relations and the maturation of industries (Yin 2009).

5.4.2 Categories of case studies

Yin (2014) stated that case studies can be divided into three categories: exploratory, descriptive, and explanatory. Table 6 describes these categories.

Table 6 Categories of Case Studies

Category of case study	Description
Exploratory case study	This study aims to identify a specific practice or explore a current situation or phenomenon in context (Schell 1992; Yin 2018). This category seems to concentrate mainly on addressing questions related to how and what rather than why (Yin 2012). Therefore, the current research did not employ this category, which aims to gain an in-depth understanding of the practice of teamwork in the ED based on the thoughts and beliefs of the staff members.
Descriptive case study	The purpose is to describe a phenomenon and to provide a detailed account of a specific case (Yin 2009). It describes the natural phenomena within the data in question, such as how readers use different strategies and use them. A researcher's purpose is to describe the data as they occur (Zainal 2007; Bradshaw, Atkinson, and Doody 2017). The descriptive case study has a broader scope to gain a deep understanding that involves better understanding and exploration of the practice. This category may have been appropriate for this research study, but it was rejected because a better design of exploring, describing, and explaining was employed.
Explanatory case study	An explanatory case study allows a researcher to acquire an initial insight into a poorly understood subject and is the most suitable category for the current research (Yin 2018).

Source: Yin (2014)

5.4.3 The type of case study used in this thesis

The practice of teamwork in EDs in the KSA was not discussed before this thesis. In this regard, an explanatory case study allowed me to investigate the perspectives and the experiences of the ED staff members when interacting with each other, the barriers, facilitators, skills, the importance of teamwork, and how they link to emergency services.

In Yin's (2018) view, there are no restrictions between the three types of case studies; moreover, some of the best case studies combine exploratory, descriptive, and explanatory approaches. Accordingly, this study was a flexible explanatory study involving exploratory and descriptive elements (Baxter and Jack 2008; Yin 2018). I needed to explore what, how, who, when and finally, why. The explanatory case study approach helped me to develop a deeper understanding of the phenomenon (teamwork), especially when there is a lack of studies in the KSA. This case study design provides flexibility that other qualitative approaches do not offer (Thorogood and Green 2018).

5.4.4 Design of a Case Study

Yin also characterises case studies into four different designs; these are four different types of case study research designs, including embedded multiple-case, holistic multiple-case, embedded single-case, and holistic single-case (Yin 2003). The primary difference between holistic and embedded case studies is that the holistic focuses on a single unit of analysis: teamwork in an ED in KSA. In contrast, the embedded study approach examines multiple units of analysis studied within a case (Yin 2014). Embedded designs involve several subunits (such as meetings, roles or locations), each of which is explored separately; results from these units are drawn together to present an overall picture (Rowley 2002; Yin 2014).

Stake (1995) and Yin (2009) indicated that such case study research can comprise single or multiple cases. Thus, it is vital to determine what type of case study is most appropriate for the study's purpose. Stake (1995) and Yin (2009) suggested that a single case study design can be applicable when examining unusual, rare, critical cases or investigating revelatory cases to explore a previously inaccessible aspect of a phenomenon. In a revelatory case study, researchers can explore and understand phenomena that have not been studied before (Xian and Meng-Lewis 2018).

For the current study (to the best of my knowledge), exploring the practice of interdisciplinary teamwork in the EDs of the KSA has not been done previously. Thus, single

case studies are instrumental when exploring new or under-researched areas at the early stages. As a result, they can be used to identify variables, generate hypotheses, and establish a foundation for further research (Dyer and Wilkins 1991; Gustafsson 2017). Indeed, single-case designs allow for more exploratory investigations (Yin 2009; Ozcan et al. 2017), unlike multiple case studies that examine several cases to identify and understand differences and similarities between cases (Heale and Twycross 2018).

This current study did not employ a multiple-case design because it required resources and time (Yin 2003) that were unavailable to me. Due to the significant investment of time and resources, the study's scope could not be extended to multiple hospitals, which would have required additional investigators and more funding. Because this research was conducted as part of a limited-funding PhD programme and within a short period, it was impossible to undertake a broader investigation. The benefit of a multiple-case design is that it allows cross-case comparisons, permitting verification of the evidence (Yin 2003); however, this study did not aim to compare between cases, focusing only on the practice of teamwork in one setting.

Despite their strengths, single case studies also have limitations. A significant weakness of this approach is its generalisability. Depending on the context, it can be challenging to determine whether the findings apply to other cases or contexts (Yin 2003; Dyer and Wilkins 1991; Gustafsson 2017). However, the selection of this particular ED provided a realistic and common example of what the healthcare system in KSA is like. Being one of the 287 public hospitals under the control of the MOH (MOH 2021), this study may reflect the challenges and dynamics encountered by a large portion of the healthcare facilities in the country. This provided opportunities for findings and insights from the study to have broader applicability and relevance to other ED contexts in the KSA.

Case studies can examine multiple units of analysis (embedded case study) or a single unit (holistic case study) (Yin 2003; 2014). The research question guides the choice of unit analysis of the case study (holistic or embedded case study) (Baxter and Jack 2008). This current study used a single case study, and a holistic design was selected because it is suitable for evaluating a single unit (teamwork in the ED) (Yin 2014). The study aimed to gather comprehensive data for more thorough results, thus utilising a qualitative single case study and a holistic design.

Further, the different data collection methods and analyses were applied to this single unit, which appears to take a holistic approach. The holistic approach is often necessary for understanding social phenomena, organisational dynamics, and human behaviour (Yin 2003; Dyer and Wilkins 1991; Gustafsson 2017).

Moreover, a qualitative case study also allows for a deeper exploration of a particular subject using established theories (Hartley 2004; Gregory 2020). Below, I have discussed how Reeves et al.'s (2010) conceptual framework (discussed in Chapter Three) was applied in this study.

5.5 The Application of Reeves et al.'s (2010) Conceptual Framework for IPT

The conceptual framework is a critical element of the research design, which is composed of concepts, assumptions, expectations, beliefs, and theories that assist in framing and interpreting the findings of a study (Miles and Huberman 1994; Ravitch and Riggan, 2012; Luft et al. 2022). Hartley (2004) argues that drawing on a theoretical or conceptual framework can improve the quality of case studies and prevent meaningless descriptions. As a result, researchers can apply existing frameworks to explain complex, context-specific phenomena (Rule and John 2015; Alyami 2021; Muhanna 2021).

Moreover, some qualitative case study researchers begin with a framework to structure their research (Al-Turki 2019; Alyami 2021). However, in this case study, the data were collected inductively as most frameworks, such as Reeves et al. (2010), were developed in Western countries with different cultures and contexts. In contrast, a unique culture and healthcare system characterises the KSA (Bindayel 2022; Alyami 2021), which may reveal factors different from Western settings. This approach allowed themes and aspects to emerge naturally from interviews, observations, and documentation reviews.

Upon collecting and analysing the data, this framework was employed as a lens to compare the emergent findings in the Discussion Chapter. The findings revealed several factors that influenced teamwork in the ED, which mostly aligned with the factors highlighted in the framework. Bingham (2023) supports interpreting and comparing research findings with relevant frameworks, as they help to integrate the findings in a broader theoretical context. Thus, aligning and comparing emergent themes with factors from Reeves et al.'s (2010) framework ensured that my analysis was more than simply presented. They also connected to the relevant theory, enhancing the quality of the case study's analysis. This connection

improved the significance of my research by improving its rigour and adding to the theoretical context (Bingham 2023).

5.6 Research Method and Procedure

Research methods are critical to any research study, providing a clear and structured approach to collecting and analysing data (Scotland 2012). Therefore, the process and details for sample selection, sampling, research instrument, collection and analysis procedures, and ethical considerations are explained below.

5.6.1 Study setting

This study was conducted at the ED of the New Hospital (pseudonym) in the Northern Borders region, the largest hospital in the region, with 300 beds). This hospital is considered the major public hospital in the region that provides health services (MOH 2017; 2018; Saudi Press Agency 2020).

5.6.2 Data collection

The data were collected between September 1 and November 30, 2021. In qualitative studies, three primary methods to collect data are focus groups, observations, and interviews (Savin-Baden and Major 2013). This study's data collection comprised non-participant direct observation, semi-structured interviews, and documentary review. The combination of methods is a common technique in qualitative methodologies (Natow 2020) and means the triangulation of these methods will contribute to developing a comprehensive understanding of the phenomena (Patton 1999; Joslin and Müller 2016). Further, a major strength of the case study is the use of multiple sources of evidence (Yin 2018).

The advantages of data triangulation include “increasing confidence in research data, creating innovative ways of understanding a phenomenon, revealing unique findings, challenging or integrating theories and providing a clearer understanding of the problem” (Thurmond 2001, p. 254). Moreover, triangulation improves the quality of a study and confirms its findings in case studies (Yin 2018). These methods complemented each other, and the use of triangulation enabled me to explore the practice of teamwork in the study context.

5.6.3 Sampling strategy

Research sampling is the process of selecting the participants or the units to achieve a study's purposes (Martínez-Mesa et al. 2016). According to Savin-Baden and Howell-Major (2013) and Lee and Landers (2022), qualitative research typically relies on three non-probability sampling techniques: snowball, convenience, and purposive.

Palinkas et al. (2015) indicated that purposive sampling is one of qualitative research's most common sampling techniques. In addition, for the case study, a purposive sampling approach allows a researcher to reach a representative case, addressing the research objectives (Seanwright and Gerring 2008). Further, purposive sampling is employed to recruit those who know the phenomenon or expertise in the subject of assessment (Creswell and Poth 2016; Etikan, Musa and Alkassim 2016). This method allows for identifying and recruiting information-rich cases or individuals who freely express their opinions and experiences in an expressive and reflective approach (Rai and Thapa 2015; Andrade 2021).

For these reasons, a purposive sampling approach was used to recruit the ED staff (physicians, nurses, allied health professionals, and administrators) to participate in the study. These staff members control the ED services of the public hospitals in KSA (Al Owad et al. 2018; MOH 2018). These participants were thought to provide rich data regarding the practice of teamwork in the ED. Using a purposive sample approach was the best method for generating data and answering the research question for this case study (Seawright and Gerring 2008; Campbell et al. 2020).

Participants were chosen using the following inclusion criteria:

- Saudi and non-Saudi staff
- Staff from different age groups, education levels, positions, ethnicities, faiths and genders, and different professional disciplines
- One year or more of experience in the ED
- English and Arabic speakers

Participants with less than one year of experience were excluded because this group would be too inexperienced in teamwork to contribute to the research question.

5.6.4 Sample size

When determining the sample size for qualitative research, the number of participants included must be adequately diverse and large enough to achieve the study objectives (Dworkin 2012; Patton 2014). Crabtree and Miller (1992) proposed that between 20 and 30 respondents is adequate in qualitative studies, with larger samples yielding little additional knowledge (Marshall et al. 2013). When considering their nature of work, nurses, physicians, allied health professionals, and emergency administrators are all representatives of the ED, and they all play a part in the emergency response in the hospital. Therefore, the sample from all groups was chosen to assess the nature of teamwork among the selected groups. Thus, twenty-two participants were purposefully selected from the ED (7 physicians, 10 nurses, 3 allied health professionals, and 3 administrative workers). There was a desire to recruit more participants, but a few staff refused due to their fears of being recorded and their lack of free time.

In qualitative health research, data saturation is the most commonly cited justification for sample size (Vasileiou et al. 2018). In addition, many widely recognised titans of qualitative health and applied research (e.g., Morse 1995; Sandelowski 1995; Chamberlain 1999; Morrow 2005) support saturation and argue that it applies to qualitative research in general. In this study, data saturation was reached after completing 21 interviews, with no new information added from the participants.

5.6.5 Interviews

This study's first data collection method was semi-structured interviews based on Corbin and Strauss (2015). As Yin (2013) points out, interviewing participants as part of the data collection process is one of the most significant components of case studies research because the data are captured from the participants' minds. Corbin and Strauss (2015) argue that semi-structured interviews are optimal as they help to maintain consistency over the concepts covered during each interview. This technique usually includes a dialogue between the researcher and participant, guided by a flexible interview protocol and supplemented by follow-up questions, probes and comments (Hardon et al. 2004) (Appendix 9). This approach can give the participants a degree of freedom to explain their thoughts and highlight their areas of particular interest and expertise (Carruthers 1990; Galletta 2013).

Interviews have been argued to be the primary data collection tool in case study research. This method is vital to understanding people's perceptions, attitudes, and thoughts regarding a phenomenon (Yin 2018). Additionally, the purpose of the study was to examine the perspectives and experiences of ED staff members in the KSA regarding the practice of teamwork. The use of interviews in the research allowed me to ask relevant questions that helped to gain deeper insights into the participants' opinions, sometimes leading to new, valuable information that may not have been initially considered.

Although interviews provide researchers with the advantages stated above, they also have disadvantages. According to Savin-Baden and Major (2013), analysing interview data can be time-consuming. A further concern is that a participant's circumstances and moods, including their busy schedules, the inconvenient time of the interviews, and early in the morning or late at night, may influence the data collected.

I arranged all the interviews at the participants' convenience to minimise such issues; for example, all the participants were free to decide the time and the place of their interview to suit them. Furthermore, light refreshments were provided during the interview session to facilitate a comfortable and hospitable environment.

According to some authors (e.g., Yin 2013), the interviewing process can result in biased or warped responses as the interviewees provide data that the research author wishes to hear. As a solution to this problem, Spradley (2016) and Hesse-Biber (2007) suggested ways to avoid it throughout the interview. Interviewers are advised to pay attention and actively listen to the interviewee, maintain eye contact, keep a respectful dialogue, be polite and amicable, and hold neutral expressions during the interview (Hesse-Biber 2007; Spradley 2016).

This study considered a semi-structured interview the most suitable approach for the current research. The semi-structured interview approach is commonly utilised in qualitative research and is the most frequent qualitative data source in health services research (Given 2008). This technique usually includes a dialogue between the researcher and participant, guided by a flexible interview protocol and supplemented by follow-up questions, probes and comments (Hardon et al. 2004). This approach can give the participants a degree of freedom to explain their thoughts and highlight their areas of particular interest and expertise (Carruthers 1990; Galletta 2013).

Semi-structured interviews can be in-depth (Eppich et al. 2019). In-depth interviews can provide the opportunity to step into the interviewee's mind and discover how they experience

the world (McCracken 1988; Mears 2012). Moreover, in-depth semi-structured interviews are the most commonly utilised form of interviews in qualitative research studies, often serving as the primary mode of data collection (DiCicco-Bloom and Crabtree 2006; Eppich et al. 2019). Further, Grover et al. (2017) used semi-structured and revealed rich details about the practice of teamwork in an ED. Therefore, in-depth semi-structured interviews were employed in this current research study. Also, this was chosen as it balances the limitations of the other two types of interviews. I employed this approach, using a loose topic guide to direct the interview process while still allowing for open-ended responses from participants and ensuring that the interviews remained within the scope of the research.

5.6.6 Pilot interviews

Conducting a pilot case study is an important step in conducting case study research, as it enables the researcher to improve data collection strategies, both in the data collection process and its content (Yin 2018). Based on Yin (2018), the pilot case study is not intended as a pre-test but rather as a process that enables the development of appropriate lines of questioning for data collection and guides and assists the data collection process (Yin 2018).

Before conducting the interviews, I conducted three pilot interviews to test and refine my approach and assess the credibility of the interview questions and their design. This pilot study helped me identify any issues that may appear during the interviews and impact the data quality (Majid et al. 2018).

Pilot interviews were conducted with three female nurses in September 2021. They were carried out in the hospital in a quiet place where confidentiality was assured. The three participants were selected after I had repeatedly visited the hospital to inform them of the purpose of the study and the objectives. To enrol in the pilot interviews, participants contacted me via WhatsApp. Pilot interviews were conducted in Arabic, the first language of the participants. The three initial interviews with the purposive samples were relatively short, with little in-depth information about the subject matter gleaned. I had not considered a few areas during the initial stages of my interviews; consequently, the respondents' answers were not fully explored. This led the supervisors to provide suggestions for improving the interview quality, such as providing techniques and examples for probing questions and conducting more in-depth interviews. After the pilot interviews, the series of questions was modified, as it was identified that participants preferred an opening so they could become settled before discussing the questions. Hence, positive preparation techniques were

employed, such as asking the participants general questions about their years of experience regarding the KSA.

5.6.7 Interview guide

I developed the main interview questions through the recognised themes and sub-themes within the literature review. One instance of this type of question is, 'What are the barriers and enablers you encounter when practising teamwork in the admission areas of the ED, and can you please provide examples?' (see Appendix 2). This guide enabled me to structure the interview continually through the organised questions for all interviewees, while flexibility was provided to allow for investigation, where the researcher believed it necessary, for each separate interview (DiCicco-Bloom and Crabtree 2006; Qu and Dumay 2011).

5.7 Ethical Considerations

I contacted the Research Ethics Committee in the School of Healthcare Sciences, Cardiff University, and Northern Health Affairs in the KSA. Then, I submitted the required ethics application by email to obtain ethical approval and permission to access the hospital.

All the research instruments, including the ethics application (Appendix 3), the participant information sheet (PIS) (Appendix 4), the invitation letter (Appendix 5), and the participant consent form (Appendix 6), were included with the applications. Permission from the Research Ethics Committee in the School of Healthcare Sciences, Cardiff University, was obtained on April 21, 2021 (Appendix 7), and permission from Northern Health Affairs in the KSA was obtained on June 10, 2021 (Appendix 8).

Research ethics are the principles and guidelines researchers should follow to conduct their research ethically and responsibly (Gajjar 2013; Arifin 2018). Researchers must consider several factors, including protecting the rights and welfare of participants, ensuring honesty and integrity during research, and minimising participant risks (Gajjar 2013; Arifin 2018).

5.7.1 Informed consent

Participants were autonomous individuals capable of giving informed consent. Obtaining informed consent is essential to ethical research practice (Hardicre 2014). The participant information sheet consisted of two parts. Part 1 included clear and concise information about the study topic and specific features of interest; this allowed the ED staff members to decide

whether the study was of interest to them. Part 2 offered more information about the study process, confidentiality, and data protection. Before the start of each interview, the participants provided written consent for participation in the study without coercion. Participants were informed of the right to withdraw from the study at any time without giving any reasons. Participants had the right to disclose or withhold information at any time.

5.7.2 Confidentiality and anonymity

To maintain confidentiality and anonymity, I ensured that any data obtained from the participants were kept strictly confidential and that identifying the participants involved in the study was impossible (Morse and Coulehan 2015; Saunders et al. 2015). Participants were informed about the nature of the data to be used in the research and the steps I adopted to protect and store their data. The study used pseudonyms to refer to participants' names and research sites. Individuals' identifying information was kept separate from the anonymised data. All participants were assured of confidentiality before the interview began.

5.7.3 Data protection and privacy

I adhered strictly to the Data Protection Act of 1998, and all records and electronic files were password protected. Data security was considered throughout the entire research process. Strict adherence to the university's procedures for managing and storing research data was ensured (Cardiff University Research Data and Retention Schedule 2021). I also ensured all data were held securely to prevent accidental loss or unauthorised access to personally identifiable information. Following Cardiff University's Research Data and Retention Schedule (2023), data will be stored securely for five years. After participants were informed about the secure storage of their data, they were assured that I would share anonymous data with supervisors and, if published in professional journals, in the final report.

5.7.4 Fair treatment and management of risks

Interviews were conducted in secluded locations, which helped ensure the anonymity of the collected data (Rowley 2012; Dempsey et al. 2016). The participants were informed that if any harmful practices or unethical conduct were disclosed during the interview, it would be reported to the appropriate authorities for appropriate action (Yip et al. 2016; Kostovicova and Knott 2022).

5.8 Interview Pre-Visits

From 1st September 2021, I conducted multiple visits to the hospital and screened the ED. The primary multiple visits were to meet the director of the ED and introduce myself and my research study, gain access to documents, and plan the target population of the current study. During my visits, the ED director talked with the ED staff to introduce me and my research, ensuring they were informed and familiar with the study. Afterwards, some ED staff expressed their willingness to participate in the study and permitted me to establish a relationship with them. I explained my inclusion criteria to the ED staff members and collected the contact information of those who met the research criteria. Following this, I prepared a list of the ED staff to be invited to participate in the research. All the participants were invited via WhatsApp to take part in the current study. WhatsApp is KSA's most popular social media communication tool, and people prefer it over email. After inviting the selected members and sending them a participant information sheet in English (Appendix 4), I allowed them some days to decide whether to participate in the study. In addition, I informed them via WhatsApp messages that the participants were free to discuss any inquiries that may have arisen at any time before, during or after the study. Those who consented to participate in the study were contacted by phone to arrange the interview date, time and location. Before participating in the study, all participants signed a formal written consent form (Appendix 6). Finally, a similar invitation process was used for all the other two work shifts in the ED.

5.9 Day of the Interviews

All 22 interviews were conducted, focusing on the participants' comfort and privacy. Each interview followed a similar process and preparation. Some interviews were held in coffee shops with private spaces, a choice made by the participants for its convenience and privacy. Other interviews were conducted in a suitable and private location, such as a work office or conference room in the study setting. This flexibility in choosing the interview location aimed to ensure the participants' comfort and confidentiality, enhancing the quality of the interviews and the data collected.

I arrived 30 minutes earlier on the interview day to prepare the meeting place and ensure its readiness. All the participants arrived at the scheduled time except for three participants. The three participants apologised for being late and gave me the option to reschedule or wait. I chose to wait to avoid rescheduling other interviews in the future and to adhere to the

interview plan. On the day of the interviews, I welcomed the participants and thanked them for their time and participation. To establish a comfortable and welcoming environment, I initiated a casual discussion with the participants regarding their days and my educational background from Cardiff University in the UK. The primary purpose was to break the ice and encourage the participant to speak. Additionally, I provided coffee and refreshments to the participants, creating a comfortable atmosphere for discussion. Then, I asked if the interview could begin and asked the participants to sign a consent form, informing them that their audio recordings would be recorded and that they could withdraw at any time without any reason.

I utilised a range of approaches to obtain high-quality data by listening closely to the interviewees and not interrupting them while they engaged in conversation (Gubrium and Holstein 2012). Moreover, I used probing questions in their inquiry and clarified them in cases where the participants did not understand them. Each interviewee was provided with sufficient time to think carefully and answer the questions.

The interviews were recorded using two iPhones with the smart voice recorder app. If one of the apps stopped working the other recording would still be available as a backup. After each interview, I created a Word document file to keep the participants' names, pseudonyms, and contact information, allowing me to refer to direct quotations during the analysis.

The length of each interview ranged from approximately 45 to 60 minutes. This length has been found to be adequate across studies (Newman et al. 2015; Assaf, Holroyd, and Lopez 2017). This length proved appropriate as the participants shared their perspectives and experiences regarding teamwork during this time.

5.10 Documentation

The second method applied in this research study was a documentary review. Documentary review is particularly appropriate for qualitative case studies—intensive studies providing plentiful descriptions of a single phenomenon, programme, organisation, or event (Stake 1995; Bowen 2009). After receiving approval in September 2021, I made multiple visits to the study setting to gain access to records and documents.

According to Yin (2014), the inclusion of documentation offers a variety of advantages: it is stable and can be reviewed frequently; it is unobtrusive and not specifically created for the case study, and it contains information and details of an event and is wide and can cover long periods, occurrences, and settings.

However, while some documents may be difficult to obtain, this did not pose a problem for this study since I received permission to access the needed statistics and documented protocols. Indeed, I asked the ED director to provide me with documents relevant to teamwork, policies, or any materials pertinent to my study. Following this, the director explained to me that the only documents applicable to my research were the *Hospital Policy and Procedures* book (2020), the ED book (2020), and the Teamwork Practice Evaluation in the ED (2021).

As a result, I reviewed all these documents to determine the information related to or impacts the practice of teamwork in the ED according to hospital policy (Bowen 2009; Gorsky and Mold 2020). The Saudi MOH wrote these documents as guidelines for hospital staff members. The MOH has the authority and credibility to control healthcare policies and regulations in KSA (MOH 2021). Despite their documents providing various healthcare subjects, including disease management and treatment protocols, information about teamwork was less comprehensive.

Furthermore, the ED director allowed me to transcribe the necessary information from these documents into my notebooks. Accordingly, I reviewed the documents provided and accurately transcribed the details required for incorporation into my study.

5.11 Non-participant Observation

The last method is observation, a common method of data collection used by researchers interested in understanding different aspects of human behaviour utilise. Creswell (2014, p. 239) said: "A qualitative observation is when the researcher takes field notes on the behaviour and activities of individuals at the research site."

The observation method has two major types: participant observation and non-participant direct observation (Kawulich 2012). The aim of conducting the observation in this study was to uncover the practice of teamwork among the healthcare staff when they interact with each other in the ED. Walshe et al. (2012) define observation as a method of analysing people's actions, behaviours, and roles.

The non-participant observation conducted in this research study involved observing without interacting with the objects or people in the setting (Kawulich 2012). Non-participant direct observation in a healthcare setting can offer a rich method for understanding safety and performance improvement (Catchpole et al. 2017). It is also a means to understand the

complexity of healthcare work that might otherwise be poorly understood or neglected (Catchpole et al. 2017).

Before starting the observation, I discussed it with the ED director and received the necessary approval. Following this, the ED director informed the ED healthcare workers about the upcoming observations. Before starting the observations, PIS were given to the ED staff to ensure they were aware of and understood the observations. Additionally, I provided consent forms to the ED staff working during the shift before each observation session. After they had signed and agreed to be observed, I proceeded with conducting the observations.

Initially, I entered the field without predetermined categories or strict observational checklists. The first part of the observations was focused on observing the general set-up of the ED. During this visit, I familiarised myself with the set-up. Areas such as the design of the ED, i.e., the number of emergency rooms, the number of beds, the number of stations, and the number of individuals at each station and their roles, were observed, and notes were taken.

The second part of the observation focused on the routine activities at the ED, including who was involved in the activities, their roles in the activities, and their characteristics. At the beginning of an observation, Corbin and Strauss (2014) suggest that researchers should stand back and let the scene unfold while making general notes. The third part of the observation focused on how the staff members interacted with each other in the ED.

I was placed in the ED during the observation, where I could see and hear what was happening (Corbin and Strauss 2014). As a non-participant observer, a researcher only observes, takes notes, and does not become directly involved or participate in any activity (Creswell and Poth 2016; Spradley 2016). Therefore, all observation sessions were recorded in written format; a research notebook was used to record all notes in each session, written during the session. In each observation session, I categorised the notes I took according to specific criteria, including the observation date, day, and the particular topic or focus of the observation. This organisation of notes allowed me to keep track of the observations made during each session and allowed for easier retrieval and analysis of the data collected.

I followed the rule of thumb that Mills and Stothard (2000) developed to decide how long the observation period would be. Mills and Stothard (2000) suggested that a rule of thumb is to observe 30–60 minutes of high-tempo operations and 2–3 hours in a slower tempo per observation. Mills and Stothard (2000) suggest not making the period so long that the

observer becomes fatigued. I attended three days a week for two weeks of observations. During the observations, I captured a range of behaviours, interactions, and practices that provided valuable insights into the teamwork dynamics in the ED (see the filed notes in the findings chapters).

5.12 COVID-19 Guidelines

During my data collection, I followed Coronavirus guidelines by taking COVID-19 vaccinations, maintaining social distancing, and wearing a mask to avoid catching and spreading the virus (Sun and Zhai 2020; Lehman et al. 2021).

5.13 Data Analysis

Data analysis is an essential research component (Grbich 2013; Creswell 2014). Harding (2018) stated that the data analysis process involves examining, comparing, pulling apart, and connecting different pieces of data to draw a conclusion. Case study research analysis can be divided into four general strategies (Yin 2018).

The first strategy is dependent on theoretical propositions. This strategy was not used in analysing the data within this research study because the theoretical orientation strictly controls the analysis. Dependence on theoretical propositions drives researchers to follow a predetermined concept to analyse the data deductively, "pointing to relevant contextual conditions" (Yin 2018, p. 168).

The second strategy is working the data from the ground up. This strategy is an inductive approach in which the data independently and freely speaks about itself without constraints. As discussed in section 5.5, this strategy allowed me to observe patterns and search for concepts emerging from the data without predetermined concepts or frameworks.

The third strategy is to develop a case description under a specific framework based on literature reviews, which is an alternative if a researcher encounters difficulties utilising either of the first two strategies.

Examining plausible rival explanations is the fourth strategy (Yin 2018), combining the previous three strategies. The fourth strategy involves recognising that the observed and emergent data may be affected by external factors rather than my intervention. Therefore, I needed to explore ways to organise and analyse the data accordingly. However, this strategy

was not employed in this study because it was deemed highly susceptible to interpretation bias.

In protecting the participants' privacy, the individual semi-structured interviews allowed me to gain rich, in-depth data without being influenced by external influences. Arguably, the second strategy (working the data from the ground up) was the most suitable for this research, as it allowed me to examine the data through an inductive approach and highlight unique findings and key concepts free from theoretical propositions. According to Yin (2018), case study data analysis is a flexible process in which the researcher does not have to follow a specific analysis strategy. I, therefore, analysed the data inductively from the ground up.

5.14 Thematic Analysis

Thematic analysis was employed to identify, analyse and report data patterns (Arksey and O'Malley 2005; Levac et al. 2010; Miles et al. 2014). Thematic analysis examines specific patterns and themes of meaning within a particular data set. This thematic analysis focuses on identifying patterns combined to identify new themes (Nowell et al., 2017). Utilising this approach in reviewing existing work contributes to organising and providing a rich description of a data set and theoretically interpreting the meaning within the data (Nowell et al., 2017).

Braun and Clarke's (2022, pp. 35–36) framework was followed. This thematic analysis framework has been argued as one of the most effective approaches in social sciences because it offers a clear and usable framework for conducting thematic analysis (Maguire and Delahunt 2017). This framework has been effective in analysing interdisciplinary teamwork findings, which helped identify key factors influencing teams (Grover et al. 2017; Alyami 2021; Lapierre et al. 2019). This framework has six steps for conducting thematic analysis, as outlined below.

5.14.1 Familiarisation with the data

I transcribed and then listened to the interviews' records several times to immerse myself in all the data and ensure the accuracy of the transcriptions. I then analysed each participant's case independently. Because I collected the data, I actively participated in the transcription and repeated listening sessions, enhancing my understanding of the results. By experiencing the entire process, from collection to analysis, I could better understand each participant's

perspectives, noticing minor details I would otherwise have missed. According to Green et al. (2007), immersion in the data provides a clearer understanding of the subject discussed between the researcher and the participant, allowing me to link disjointed parts of the conversation into a clearer picture. Green et al. (2007) and Vaismoradi et al. (2016) stated that when a researcher is immersed in the data, this immersion creates a more manageable analysis rather than the confusion that large amounts of data to be processed simultaneously cause.

Furthermore, through intensive engagement with the data, I was able to connect seemingly disparate parts of the conversations. Participants commonly diverge from the main topic or provide fragmented responses during a single interview. I pieced together a coherent picture by listening to these fragments repeatedly and carefully analysing them. Thus, the narrative flow was maintained, and the analysis remained accurate to the participants' intentions.

Several initial ideas were noted that were relevant to the study's aim. For example, it became evident that gender segregation was a significant topic that many participants discussed, which influenced team interactions.

In addition, I carefully reviewed my field notes from the observations. I gained a better understanding of ED staff behaviours and teamwork practices from this immersion, supporting the findings from the interviews. For example, during one observation, I noticed that male and female staff worked in separate rooms and rarely interacted.

Moreover, I reviewed relevant documents, such as hospital policies and procedures, to provide additional context. In addition to the data from interviews and observations, these documents provided a foundational understanding of the ED context.

As a result, the data from interviews, observations, and documents were fully understood, providing a comprehensive view of teamwork in the ED.

5.14.2 Generating initial codes

Upon reviewing the data and determining the scope and context of the key experiences under study, coding was developed to organise the data and establish relationships between the experiences and teamwork described in the data (Bradley et al. 2006). Essentially, codes are characteristics of a dataset that appear interesting and are the simplest element of the raw data

relevant to assessing the phenomenon Braun and Clarke (2022). Data pertinent to each code is also collated and combined during this phase.

I read the data transcription repeatedly and took notes to improve the coding process. I manually coded each interview, observation, and document line-by-line, using a Microsoft Word field notes document with codes in right-margin text boxes (Saldaña 2021). (See Appendix 10).

5.14.3 Example of coding process

Following this step, a hard copy of each interview, observation, and document was printed and reviewed for more codes. Saldaña (2021) recommends using hard copies and writing codes in pencil to give researchers more control over and ownership of their work. I created a mental thematic map based on the codes through this process. Consequently, manual coding produced more accurate codes, enabling me to dive into the data and understand it effectively. I coded each interview, observation, and document separately and then combined these codes into an Excel sheet for a more precise organisation.

5.14.4 Searching for themes

At this stage, for example, I designated a column for multicultural-related codes and similarly categorised others. Following this step, I created a separate Excel sheet for these codes (multicultural-related codes). On this sheet, I grouped codes related to, for example, gender interactions into a single row, categorising it as a sub-theme and naming it “Gender Segregations”. In addition, I grouped codes regarding discrimination into another row, naming them “National Origin Discrimination.” As a result of these sub-themes, a broader potential theme developed: “Multicultural Teamwork” (see Appendix 11). The same process was applied for all other themes and sub-themes, ensuring consistency and relevance across the analysis.

Thus, themes were identified based on the codes and the sub-themes. These themes emerged clearly from the transcripts, observations, and documents. A detailed textual analysis involves precisely identifying and examining relevant information. Based on this comprehensive analysis, several major themes emerged as key pillars. Due to their repeated presence and significant impact on the overall narrative, themes such as “The Value of Communication,” “Patients’ and Families' Behaviour,” and “Leadership” stood out clearly (see Appendix 12).

5.14.5 Reviewing themes

This stage involves reviewing the emergent themes and sub-themes from the previous stage, which is crucial to ensure the quality of the categorisation created. As I progressed through this stage, I realised some themes were not independent and could be categorised under other themes, while several sub-themes could be merged under one theme. For example, in the "Language Differences Among Team Members" sub-theme, I found that the focus was mostly on communication challenges rather than multicultural aspects. As a result, I placed it under the relevant theme of "The Value of Communication" to emphasise effective communication rather than cultural diversity. This adjustment helped ensure that each theme and sub-theme was accurately categorised based on their primary focus.

5.14.6 Defining and naming themes

At this stage, I further reviewed and defined the themes while developing a clearly defined name for each theme. This clear definition was achieved by returning to the collated data extracts for each theme and organising them into logical structures with an appropriate narrative to identify the significance of each theme and why they were important. This analysis strengthened the procedure of finalising the named themes according to their content (Braun and Clarke 2022). The themes and the sub-themes that emerged from the detailed data provided a clear and consistent understanding of the subject.

I also reread the entire dataset during this phase to ensure that the themes accurately reflect the meaning of the data. As a result of the re-examination, no significant data were missed, and each theme comprehensively represented the findings derived from the participants. I also adjusted the themes and sub-themes based on discussions with my supervisors. This process refined the coding structure and ensured the themes were logically sorted. As a result of these sessions, the data was often revaluated and sometimes recategorised under different themes, enhancing the accuracy and relevance of the thematic structure. Notes were written on the organised thematic documents as a final step of the analysis to assist in writing the analytical chapters.

5.14.7 Producing a report

The final report was produced at this stage. As a result of completing the previous stages, I felt I understood the meanings of the themes and sub-themes. This understanding enabled me to produce an analytical report containing examples from the extracted data. According to

Braun and Clarke (2022), a report must be logical, consistent, and avoid repetition. In addition, data from all the sources (documents, interviews, and observations) were presented together. As a result of this integration, evidence from multiple data sources was demonstrated to be consistent, strengthening the findings' consistency and validity. It offered a multifaceted perspective on the research objectives by combining different data types, providing a deeper understanding of emerging themes.

Each source was addressed equally, and their connections were clearly illustrated to show how they contributed to the themes. This approach illustrated the comprehensive nature of the data collection and the analysis process. To provide visual distinctions, illustrative quotations from the participants and documentary analysis are presented in quotation marks and non-participant observations are illustrated in a text box.

5.15 Translation of Interviews

Translation in qualitative research plays a vital role in conveying participants' meanings across languages (Yunus et al. 2022). The interviews for the study were conducted in both Arabic and English. Since this current study was part of a doctorate programme at Cardiff University, all Arabic data had to be translated into English, the university's official language (besides Welsh). Due to financial constraints, I translated the interviews myself. As an Arabic native speaker and having commenced my English language studies in 2011 (see Chapter One, section 1.2), my educational background has equipped me with the necessary skills to translate between Arabic and English in both directions effectively.

The translation process presented both benefits and challenges. One benefit was that I could closely analyse the data by personally immersing myself in the translation process, which helped ensure that the translated transcripts accurately reflected the original dialogue. In addition, this helped me to develop detailed notes on the code generation process. On the other hand, a challenge was that the translation process was time-consuming and required significant effort to ensure that the translations were accurate and captured the nuances of the original language. The translation process did not impact the results of this study because my supervisory team reviewed the translated transcripts.

5.16 Transcribing Interviews

Transcription is the act of converting spoken words, for instance, from an audio recording of an interview into written text (McGrath et al. 2019). Transcriptions of interviews can be verbatim or non-verbatim (McMullin 2021). Verbatim transcription is a word-for-word transcription that includes coughs, laughter, errors in the spoken word, sentence structure issues, and ambiguous sentences (Clark et al. 2017). Conversely, non-verbatim transcription or clean verbatim omits stutters, filler speech (like "Umm," "Uh," and "Aaaa"), errors in spoken words and non-verbal sounds such as coughing and laughing (Halcomb and Davidson 2006; McMullin 2021).

I conducted non-verbatim data transcription for several reasons. First, Moser and Korstjens (2018) indicated that the researcher could judge the data based on the importance of its contents. Therefore, I omitted the non-verbal data and excluded them as they did not appear to contribute to the data. Second, by reviewing the words and meanings critically and analytically during this transcription stage, I could gain insight into the collected data and improve the accuracy of subsequent stages, such as generating codes and finding themes (Braun and Clarke 2022). Finally, three interviews involved participants who spoke English as a second language (two were Urdu speakers, and one was a Filipino speaker). In this context, errors in their speech were detected that would have been hard to understand if transcribed verbatim.

5.17 The Rigour of the Study

Assessing the quality of the research to decrease subjectivity and ensure the findings are trustworthy is vital (Rolfe 2006; Johnson et al. 2020). Thus, every element of the study methodology must be systematic, transparent, and accurate to achieve rigour in the research process and results (Hadi and Closs 2016). Research project evaluators follow trustworthiness criteria for a particular research method, such as qualitative, quantitative, or mixed methodologies (Anney 2014). Research methods employ different evaluation criteria to ensure rigour based on different philosophical and methodological assumptions (Anney 2014). According to Guba and Lincoln (1985), credibility, dependability, transferability, and confirmability determine a study's trustworthiness. These principles are essential to the trustworthiness of qualitative findings. These elements are discussed below.

5.17.1 Credibility

In qualitative research, credibility refers to the truthfulness of the findings and data interpretation, as well as the degree to which they are believed by people (Lincoln and Guba 1985; Kyngäs et al., 2020). Essentially, it measures how closely respondents' views match the way the researcher represents them (Tobin and Begley 2004; Kyngäs, Kääriäinen and Elo 2020). Hence, credibility measures how well data and analysis processes consider the intended focus (Anney 2014; Shufutinsky 2020). This focus is demonstrated through strategies that are employed in the development and implementation of a study.

As discussed above, the current study established credibility by following methodological guidelines in data collection and interpretation of the findings. These guidelines included comprehensive information about the chosen methods and the rationale for their implementation.

First, participants who were knowledgeable and had experiences with the practice of teamwork in the ED were recruited from different backgrounds, positions, and experiences.

Second, the findings were presented transparently, utilising quotations from the interview transcripts and presenting the reader with a clear flow from data collection to data analysis to ensure credibility (Tobin and Begley 2004).

Third, close attention was paid to the words spoken and the order of the questions used during the interview to remove bias (Crouch and Housden 2012).

Fourth, triangulation methods are widely regarded as valuable in qualitative studies to ensure credibility and conformability (Johnson, Adkins and Chauvin 2020). I used a variety of data sources and data collection methods to reduce bias associated with using a single source (Tobin and Begley 2004). Triangulation methods were employed to describe the process of interpretations, views, themes, and study conclusions using multiple data sources. This increases the credibility and confirmability of the findings of the current study.

Fifth, peer debriefing was utilised to discuss research methodology, data analysis, and interpretations continuously with the supervisory team, who were skilled qualitative researchers (Noble and Smith 2015). Thus, the emerging themes are based on the data and are reasonable and conceivable to an uninterested analyst by utilising this approach (Hadi and Closs 2016).

5.17.2 Dependability

In qualitative research, dependability refers to the stability of the data over time and conditions (Lincoln and Guba 1985; Polit and Beck 2014). As Lincoln and Guba (1985) noted, an audit trail is critical to establishing dependability since readers can see how conclusions are drawn, including the decision-making process. Keeping detailed records of key features of interactions and any changes in the emergent design of the study, as well as justifications for these decisions, is essential (Clissett 2008). A study's findings must be accurate and consistent to maintain dependability (Murphy and Yielder 2010).

Throughout this study, I ensured dependability by preserving all transcripts and notes used to collect and analyse data, clearly presenting how the findings were interpreted. In this study, I presented detailed information regarding the interviews, document review, observations, coding processes and how the codes and themes were developed.

5.17.3 Transferability

Tobin and Begley (2004) defined transferability as the ability to apply findings to other settings or groups of participants (Tobin and Begley 2004). Based on Tuckett (2005), a critical component of establishing transferability is providing a "thick description" of the setting and the informants regarding research settings and interview procedures. It is essential to provide a clear and concise description of the context, participants, data collection, and analysis process to ensure transferability. Anney (2014) stated that by providing a comprehensive and in-depth account of methodology and context, thick descriptive data can boost the credibility of research judgments and allow researchers to compare their research context with other contexts.

In the current study, a thorough depiction of the research participants, the criteria employed for selection and recruitment, the settings in which the study was conducted, the method adopted for data collection, and the procedures for analysis were provided to simplify analysis and interpretation and to increase transferability. In this way, a reader is to determine whether the findings are transferable and can be applied to a wider population (Hadi and Closs 2016; Johnson et al. 2020).

5.17.4 Confirmability

In research, confirmability refers to the degree to which other researchers can corroborate or confirm the findings (Lincoln and Guba 1985). By clarifying the association between the results and the data collected, it is possible to ensure that the data and interpretations are not just figments of the inquirer's imagination (Tobin and Begley 2004). Audit trails, reflective journals, and triangulation can enhance confirmability in qualitative studies (Anney 2014). Researchers' bias should be eliminated when confirmability is linked to participants' voices. An audit trail can facilitate this by showing that the researchers did not simply find what they intended to find (Anney 2014).

Several methods were implemented to ensure confirmability, including supervisors auditing the methodological approach during the study period. First, I conducted a transcript audit, carefully reviewing the audio recordings and re-reading the transcribed text. This process enabled my immersion in and familiarity with the data, offering the necessary confidence to generate meaningful interpretations from the data. Second, the findings were interpreted jointly with the supervisors, ensuring that the interpretations were based on the data provided by research participants and not on my assumptions. Third, triangulation methods were employed to obtain data from different sources, enhancing confirmability (Johnson et al. 2020).

5.18 Reflexivity of the Study

Research reflexivity is a researcher's awareness of their role in the research process and their potential impact on the data collected and analysed (Palaganas et al. 2017). Reflexivity involves acknowledging the potential biases, assumptions, and values that the researcher may bring to the research and actively engaging with them in the research process (Willig 2019). Reflexivity shows the role that a researcher plays in the research process, including their influence on the study under investigation during the process of data collection, analysis and interpretation, through critically analysing the impact of the researcher’s role and values on the study (Gouldner 1970; Rice and Ezzy 1999). Creswell (2009 p. 196) noted that “the role of the researcher as the primary data collection instrument necessitates the identification of personal values, assumptions, and biases at the outset of the study.” researchers must position themselves in qualitative studies by being aware of their personal values, biases and experiences, which they convey to the investigation (Creswell 2013; Berger 2015). As positionality plays a key role in reflexivity, identifying my position is essential.

According to Berger (2015) and Creswell (2013), a researcher's position is related to many personal aspects that a researcher brings to their study, including, among other things, gender, culture, language and religion. Creswell (2013) maintains that, first, a researcher must talk about their past experiences, e.g., schooling, work and family structure. Second, a researcher needs to explain how these past experiences influence the researcher's understanding and interpretation of the phenomenon being studied.

Reflexivity has been described in terms of insider and outsider perspectives (Dwyer and Buckle 2009; Burns et al. 2012; Berger 2015). Insider refers to the commonalities shared between the researcher and the study participants, such as culture, professional affiliation, role and experience (Dwyer and Buckle 2009). Outsider refers to differences between the characteristics of the researcher and the researched concerning personhood and relationship position (Dwyer and Buckle 2009). These varying positions can influence the collection and analysis of qualitative research.

In the context of this research, my position fluctuated between being an insider and an outsider. I am a Saudi national male and Muslim, working permanently as a lecturer in the Department of Health Services and Hospital Administration at a large university in KSA. I was born in Riyadh, the capital city of KSA, and later moved to the Northern Border region, where I undertook my primary, secondary, and high school education.

Because I grew up, lived, and worked in KSA, I am familiar with Saudi culture and speak Arabic as my first language. In addition, my work experiences and studies have helped me understand the healthcare setting and system in KSA. My familiarity with Saudi culture and health context has enabled me to understand participants' experiences and facilitate the process of understanding and analysing the data. I bring a unique blend of academic knowledge and cultural familiarity to exploring teamwork practices in the context of Saudi Arabian culture. As Chapter One (section 1.2) outlines, my extensive background in healthcare administration and qualitative research methodologies, including data collection, interviews, and data analysis courses, equips me with the necessary experience to conduct a rigorous qualitative study.

However, because this study was conducted in a hospital in the Northern Border region, it is worth mentioning that I had not been to this hospital before initiating the data collection process. Because I am a student and was away in Saudi from 2011 until this time pursuing my studies, I have no relationships with hospitals' managerial or clinical staff. Yet, being a

Saudi national, an academic with a health administration background, and working outside the Saudi MOH's authority helped me build a rapport with local and international administrative, medical, and nursing staff during the data collection period. Additionally, my situation has enabled me to gain trust and cooperation during recruitment and data collection.

A researcher's position can profoundly influence the study in several ways (Berger 2015). First, it may influence access to the study setting since a researcher who is seen as sensitive to participants' situations may gain more willingness from them to reveal their experiences. In addition, the researcher may be more aware of the potential cooperative and informative resources. Second, it can inform the nature of the relationship between a researcher and study participants, consequently influencing the data respondents want to reveal. Third, a researcher's background and worldview may influence their understanding of the world, the practice of language, questioning, and the selection of lenses to filter the data gained from the study's respondents and to construct sense from the data. Therefore, the researcher's position can form the research's results and conclusions (Berger 2015).

In the current study, I was aware of the challenges of my position as a researcher. Thus, I employed strategies to minimise, as much as possible, unconscious and conscious bias or subjectivity. I proactively focused on establishing relationships with the participants before collecting data to create a conducive research environment and avoid potential concerns of participant influence due to observation. By building a connection and trust through open communication and mutual understanding, I sought to establish a friendly atmosphere where participants felt assured that the collected data would be solely utilised for research purposes.

Consequently, I consider myself an insider regarding culture, language, and scientific background, but I also consider myself an outsider regarding relationships and a professional career. As a Saudi national, I may have some power and privileges in the eyes of international personnel with whom I share neither a common culture nor the Arabic language. As a result, they may believe that I know some people within their hospitals or the MOH and that their participation in this study may negatively affect their work in the future. The participants were assured that their answers would not be disclosed to managers, colleagues, or other professionals to address this. Furthermore, I fully introduced myself to the study participants, including my name, home country, and workplace. I intended to provide this personal information to increase their awareness of my identity and thus enhance trust and possible me/them relationships. Moreover, the participant information sheets and consent forms

included information that I am a student in a PhD programme. By taking this initiative, participants were encouraged to speak freely and accurately during interviews.

In addition, I gave participants enough time to express their viewpoints during the interviews. While conducting the interview, I did not use leading questions or direct the participant's responses to control the answers. Data generated from the interviews did not involve making judgments or defining responses as “right” or “wrong” (Darawsheh 2014). Because I had not been working in the research setting, I did not influence the participants, which might lead them to believe that I might affect or judge their work.

Although my familiarity with Saudi Arabian culture helped establish rapport with the participants, it also posed challenges. As an example, when discussing gender dynamics across the ED teams, I thought my own experiences may have shaped my understanding. Consequently, I actively sought input from participants representing diverse gender roles to mitigate this problem. In addition, due to my background in healthcare administration, I initially viewed teamwork practices from a managerial perspective. While acknowledging this bias, I consciously sought to understand the frontline healthcare workers' perspectives to gain information based on their experiences.

Further, interpretivists assert that reality is subjective because it is derived from the individual viewpoints of the study's participants and is, thus, multiple and varied (Scotland 2012; Alharahsheh and Pius 2020). As a result of this understanding, I addressed the power relations between the participants and me. I learned that my role in data analysis does not confer dominance or the authority to form judgements (Karnieli-Miller et al. 2009).

I aimed to secure the accuracy of the case study report by checking each step of the data analysis. Also, I aimed to limit my subjective views during data interpretation, aiming to review the participants' responses about teamwork objectively. Research data should not be affected by the researcher's personal views or experiences (Darawsheh 2014). During data collection and analysis, regular updates with supervisors were conducted through meetings and emails, thereby gaining broader perspectives.

In conclusion, I am aware of all potential subjectivity and influences that might affect the research process. In the context of this research, I do not deny that my identity may impact the research process, but I aimed to decrease its impact by being aware of it. This awareness is essential for understanding respondents' experiences and helping me understand and inspect the data, thus assisting in addressing my research aim and objectives. To avoid

potential personal biases, I attempted to distance myself from the data to prevent my biases from influencing how I interpreted the findings, particularly in exploring teamwork. As a result, the Lincoln and Guba criteria of credibility, dependability, confirmability, and transferability were adopted to maintain the rigour and trustworthiness of the current study.

5.19 Summary of the Chapter

This chapter has provided an in-depth description of the research design and methods used to conduct this research. In the beginning, I explained the philosophical assumptions, followed by the methodology, research paradigm, and the justification for adopting a case study methodology and the conceptual framework of Reeves et al. (2010). In addition, I highlighted the ethical considerations and explained the data collection process, including the three sources of data collection (semi-structured interviews, documentary review and observations). The chapter also illustrated the data analysis process and discussed the trustworthiness of the research. The following three chapters present a detailed discussion of the data generated by this methodology.

CHAPTER SIX: PARTICIPANT CHARACTERISTICS AND THEMES 1-4

6.1 Introduction

The findings are divided into chapters 6, 7, and 8 because of the rich, significant, and considerable diversity of data that led to many critical findings. Consequently, each chapter discusses specific findings. This chapter provides a detailed description of the study participants' characteristics and the study's setting. It also discusses Themes 1-4, which include the meaning of teamwork, the reasons for teamwork, team members' behaviour, and multicultural teams. The findings provide an understanding of teamwork practices from the perspectives and experiences of staff when interacting with each other in the admission areas in the ED of a public hospital in the Northern Borders region of KSA.

6.2 Study Participants

The selected participants had different shift working patterns that generated a variety of perspectives and experiences at various times in the ED. Six physicians, ten nurses, three administrative workers and three allied health professionals (two laboratory specialists and one radiologist) participated. The small number of administrative workers reflected this group’s anxieties regarding disclosing any information. Allied health professionals sometimes interact with ED teams and provide services in the ED, which allowed for more perspectives, thus enriching the data. Table 7 presents the characteristics of all the participants. The participants were assigned pseudonyms to protect their identities.

Table 7 Participant Profiles

Participant ID	Pseudonym	Gender	Nationality	Professional Role	Work Schedule	Age Group	Academic Qualification	Years of ED Work Experience
P1	Ben	Male	Saudi	Manager	Full time	20–30	Higher diploma in emergency medical science & management	8
P2	Kai	Male	Saudi	Nurse technician	Full time	30–40	Nursing diploma	6
P3	Shan	Male	African	Physician and team leader	Full time	30–40	Bachelor's degree	5
P4	Hanan	Female	Saudi	Nurse	Full time	20–30	Bachelor's in nursing	6
P5	Philips	Female	Asian	Charge nurse	Full time	30–40	Bachelor's in nursing	7
P6	Francisco	Male	Saudi	The medical director	Full time	30–40	Postgraduate consultant in emergency medicine	15
P7	Adam	Male	Saudi	Radiologist	Full time	30–40	Bachelor's in radiology	6
P8	William	Male	African	Physician	Full time	30–40	Bachelor's degree	5
P9	Smith	Male	African	Physician	Full time	40–50	Postgraduate in emergency medicine	3
P10	Max	Male	African	Physician	Full time	30–40	Bachelor's degree in emergency medicine	6
P11	Rain	Male	Saudi	Director of the laboratory and blood bank	Full time	50–60	Postgraduate in toxicology and criminal drugs	30
P12	James	Male	African	Physician	Full time	30–40	Bachelor's degree	5

P13	Mia	Female	Asian	Charge nurse	Full time	40–50	Bachelor's in nursing	13
P14	Lucas	Male	Saudi	Duty manager	Full time	40–50	Bachelor's in nursing	18
P15	Yousef	Male	Saudi	Physician	Full time	30–40	Bachelor of medicine	3
P16	Lana	Female	Saudi	Nurse	Full time	30–40	Bachelor's in nursing	2
P17	Nour	Female	Saudi	Laboratory technician	Full time	30–40	Laboratory bachelor's degree	4
P18	Olivia	Female	Asian	Nurse	Full time	40–50	Bachelor's in nursing	16
P19	Emma	Female	Saudi	Nurse	Full time	30–40	Bachelor's in nursing	4
P20	Isabella	Female	Saudi	Nurse	Full time	50–60	Bachelor's in nursing	15
P21	Charlotte	Female	Saudi	Nurse	Full time	30–40	Bachelor's in nursing	6
P22	Emily	Female	Saudi	Nurse	Full time	30–40	Bachelor's in nursing	5

6.3 Findings of the Data Analysis

6.3.1 An overview of the study setting

Documentary analysis of the *Hospital Policy and Procedures* (2020), the *ED* book (2020), and teamwork practice evaluation in the ED (2021) were employed to elicit details of the study setting. The *ED* book (2020) stated that "the hospital provides emergency services to clients of different age groups and nationalities' (*ED* 2020), p. 2). The book also noted (pp. 5 and 6) the management structure of the study setting, the management structure of the ED (Figure 4), and the bed capacity (Table 8).

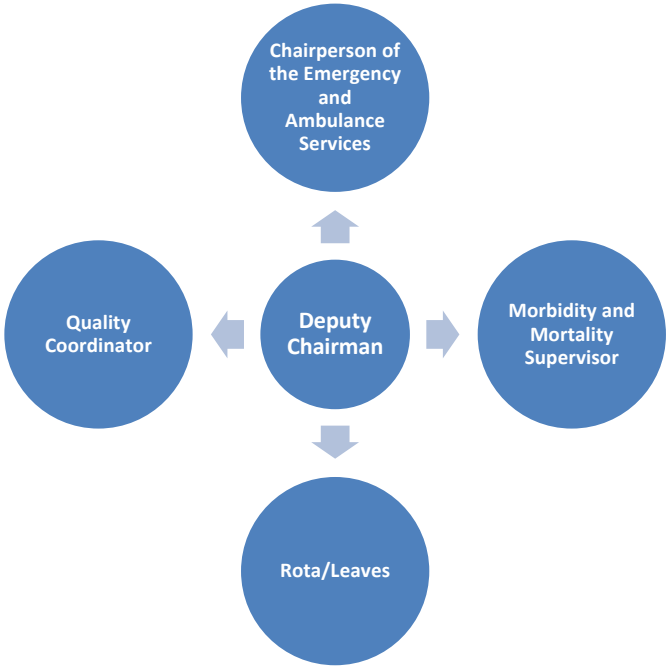


Figure 4 The Emergency Department Chart
Source. The ED 2020, p. 5

Table 8 The Bed Capacity at the Emergency Department

Bed Capacity in the ED	
Respiratory clinic	1
Minor observation rooms	2
Treatment rooms	3
Emergency rooms	8
Female observation room	10
Male observation room	10

Source: *ED* book 2020, p. 6)

6.3.2 Triage system in the emergency department setting

Based on the documents found in the *ED* book (2020), following the registration process for emergency care, triage is the first interaction between healthcare providers and patients. Skilled triage nurses routinely evaluate all patients who present for treatment to sort and prioritise them. The triage systems are usually designed to recognise the most urgent (or potentially most serious) cases to ensure they receive priority care, followed by the less urgent cases on a first-come, first-served basis. Triage was defined as "the process of determining the priority of patient management based on their severity of illness (*Hospital Policy and Procedures* 2020, p 1). The triage in the study setting has five categories (Table 9).

Table 9 The Triage Categories in the ED

Category	Description
Category I immediate	Requires immediate attention to avoid loss of life, limb, vision or permanent disability. The ED physician in charge should notified immediately. For example, cardiac arrest, respiratory arrest, major trauma, severe respiratory distress, shock, stork, arterial bleeding, and altered level of consciousness
Category II emergent	Conditions are potentially serious but not life-threatening. The patient must be seen within 30 minutes. Periodic assessment should be performed until seen by a physician. For example, shortness of breath (mild distress); hypertension (SBP> 220 or DBP> 130 with no symptom); vomiting (mild dehydration);

	abdominal pain (4-7/10).
Category III urgent	Conditions are potentially serious but not life-threatening. The patient must be seen within 30 minutes. Periodic assessment should be performed until seen by a physician. For example: shortness of breath (mild distress); hypertension (SBP> 220 or DBP> 130 with no symptom); vomiting (mild dehydration); abdominal pain (4-7/10)
Category IV conditions that relate to patient age, distress, or potential for deterioration	A patient should be seen within 30-60 minutes. These conditions include confusion (chronic, no change from the usual state), constipation (with mild pain), and urinary tract infection with mild dysuria.
Category V nonurgent	Conditions that may be acute but nonurgent. For example, diarrhoea (mild, no dehydration), minor bites, dressing changes, and medication requests. Non-urgent cases are usually delayed or referred to other units of the hospital or healthcare system, such as primary care centres (*Hospital Policy and Procedures* book 2020, p 3). These cases include suture removal, non-emergency cast removal, second dressing for a burn or wound, admission of elective cases, preadmission investigation, check-up investigation, giving medications brought from outside, refilling of medications

Source: Hospital *Policy and Procedures* 2020, p 1).

6.3.3 Themes from the data analysis

Table 10 outlines the themes and sub-themes that emerged from the data analysis during this research study.

Table 10 Themes and Sub-Themes that Emerged from the Analysis of the Data

Themes and Sub-Themes
Theme One: The Meaning of Teamwork (discussed in Chapter 6)
• **Sub-theme One: Defining teamwork** • **Sub-theme Two: The absence of teamwork training**
Theme Two: Reasons for Teamwork (discussed in Chapter 6)
• **Sub-theme One: Teamwork improves productivity**

- **Sub-theme two: Teamwork creates happiness**

Theme Three: Team Members' Behaviour (discussed in Chapter 6)

- **Sub-theme One: Disputes**
- **Sub-theme Two: Conflict**
- **Sub-theme Three: Collaboration deficit**
- **Sub-theme Four: Emotions**

Theme Four: Multicultural Teamwork (discussed in Chapter 6)

- **Sub-theme One: National origin discrimination**
- **Sub-theme Two: Belonging and identity**
- **Sub-theme Three: Gender segregation**

Theme Five: The ED Environmental Factors (discussed in Chapter 7)

- **Sub-theme One: Working in the ED is different**
- **Sub-theme Two: A shared purpose**
- **Sub-theme Three: Physical environment**

Theme Six: The Organisational Factors (discussed in Chapter 7)

- **Sub-theme One: Work shifts**
- **Sub-theme Two: Staff shortages**
- **Sub-theme Three: Management deficiencies**

Table 10 (continued)

Themes and Sub-Themes

Theme Seven: Patients' and families' behaviour (discussed in Chapter 7)

- **Sub-theme One: Violent patients' behaviour**
- **Sub-theme Two: Non-urgent patients**

Theme Eight: Effective Teamwork (discussed in Chapter 8)

- **Sub-theme One: Experience and support**
- **Sub-theme Two: Forming relationships**
- **Sub-theme Three: Harmony and compatibility**
- **Sub-theme Four: Fast-paced performance**
- **Sub-theme Five: Multitasking**
- **Sub-theme Six: Stress management**

Theme Nine: The Value of Communication (discussed in Chapter 8)

- **Sub-theme One: Communication as a critical skill**

- **Sub-theme Two: Listening**
- **Sub-theme Three: Friendly communication**
- **Sub-theme Four: Non-verbal communication**
- **Sub-Theme Five: Language differences among team members**
- **Sub-theme Six: Language differences between team members and patients**
- **Sub-theme Seven: Communication channels**

Theme Ten: Leadership within Team (discussed in Chapter 8)

- **Sub-theme One: Team hierarchy**
- **Sub-theme Two: Leader's responsibility toward the team members**
- **Sub-theme Three: The qualities of a good leader**

In each theme, the team members provided their perspectives and experiences regarding interdisciplinary teamwork in the ED. All the included themes have highlighted the barriers and facilitators experienced by the emergency staff when practising teamwork in the admission areas in the ED. This chapter covers four themes: the meaning of teamwork, reasons for teamwork, team member's behaviour, and multicultural teamwork.

6.4 Theme One: The Meaning of Teamwork

The first theme that emerged from the data was the staff's perspective on teamwork in the ED. In this theme, the prominent impressions of the participants were further categorised into two sub-themes: defining teamwork and teamwork training.

6.4.1 Sub-theme one: Defining teamwork

A key enabler for teamwork identified from the participants' responses and perspectives was that most participants understood teamwork similarly. For example, Emily described teamwork as “working interdependently toward a common goal,” with the common goal being patient safety or a good outcome for the patient's health status. Max understood teamwork as “A group of people who have a shared purpose and a shared responsibility that allows them to work interdependently to achieve the set goals.”

In identifying who was working in the ED teams, William referred to “Physicians, nurses, administrative staff, and technicians. My team includes several specialised individuals, such as doctors, nurses, radiologists, and lab technicians.”

Francisco viewed the ED team as a shared endeavour where people of different skills and experiences worked together for the common good of the patient. He said:

> I like to think of an ED team as a team sport. Medical teams are similar to football teams on many levels. In both teams, the work doesn't run smoothly unless it is distributed between the members. After distributing the tasks, coordination becomes necessary. Every successful team needs a leader who runs the workflow and supervises his/her team members closely and effectively.

Nour believed the ED team is interdisciplinary, working together toward the common goal of achieving positive health outcomes for the patients. She added:

> Teamwork means everyone is involved, so consequently, all members take credit for the job's fulfilment. As medical staff working in the ED, our main priority is to ensure the patients' satisfaction. Our job demands that we provide medical care to patients arriving at the hospital in need of immediate care. This job cannot be done by one individual. It takes a whole team (doctor, nurse, radiologist, lab technician, etc.) to bring about high-quality results because each member has a certain task to perform.

I found the definition of teamwork in the ED book. The definition illustrated that employees can work and help each other to achieve goals: "Teamwork means we can work together to reach our goals" (The ED book 2020, p. 1).

The documentary evidence shows the importance of teamwork but lacks detail and depth compared to academic definitions, which are more comprehensive. While it emphasised collaboration toward achieving shared objectives and highlights the importance of teamwork, it does not explain key concepts of teamwork definition, such as communication, plans, and coordination (Xyrichis and Ream 2008). This shows the need for a more detailed explanation of the concepts of teamwork and its importance in the ED setting.

The ED staff members recognised the importance of teamwork and efficient collaborative practices. Using team sports as an analogy, the participants emphasised the need for each member's role and the importance of leadership and coordination in the ED.

6.4.2 Sub-theme two: The absence of teamwork training

The absence of teamwork training emerged from the collected data. None of the members who were interviewed had received teamwork training. Philips spoke of teamwork as "just practice teamwork in the ED." This means they only practice it without fully understanding the key concepts that make teamwork effective. Participants expressed the desire to receive

training related to teamwork that would specifically improve the practice of teamwork and enhance team members' relations and interactions in the ED. For instance, Adam wished teamwork training was in place:

> No, I have not received teamwork training. There is supposed to be teamwork training to help the staff that do not understand the practice of teamwork. I wish that there is a committee that checks the department whether they work in a team or not.

Also, Hanan revealed that teamwork training was not provided and that there was no motivation to practise teamwork. He said, "We have received training in performing Basic Life Support (BLS). To be honest, we have not been trained in any type of teamwork skills, and there is no motivation to practise teamwork." Similarly, Yousef asserted that no teamwork training was provided: "No, I haven't received it. There are no specific lectures that we attend regarding teamwork. I just practise teamwork in the ED."

As all previous participants, Charlotte also mentioned that no teamwork training was conducted; she said, "To be honest, I have not…. We are often split into groups and given various training programmes, but none highlight the importance of teamwork or the skills it needs."

Although the ED employees have not received teamwork training, the hospital management evaluates the staff's performance based on teamwork skills. The Employee Performance Evaluation document) states: "The hospital's employees are evaluated based on their teamwork skills such as leadership skills; communication; and collaborative teamwork skills." This suggests discrepancies or gaps in the hospital's performance management and staff development processes. It is crucial to align employee performance evaluation criteria with employee resources and support.

Studies have shown that teamwork training improves clinical teamwork and patient outcomes in the EDs. For example, Obenrader et al. (2019) found that implementing teamwork skills training (Team STEPPS) enhanced teamwork and communication among the ED teams. Thus, hospital management must provide teamwork training programmes to ensure that employees have the necessary skills and support to meet the requirements of the evaluation forms.

6.5 Theme Two: Reasons for Teamwork

According to the participants, the ED staff members rely heavily on teams of healthcare professionals to carry out their operational objectives of delivering patient care. However, two sub-themes emerged based on the participants' responses: teamwork improves productivity and creates happiness. In this theme, all the participants revealed the reasons behind the importance of working within teams and provided some examples based on their experiences in the ED.

6.5.1 Sub-theme one: Teamwork improves productivity

The first sub-theme suggests that the participants believed teamwork improves productivity. This sub-theme emerged as I probed more for the reasons behind working in a team. Interweaving strands in these sub-themes were around the value of the support provided by teams. Most participants asserted that working in a team is a key facilitator that contributes to developing their knowledge and experiences while providing care in the ED. Moreover, in this sub-theme, the participants identified how teamwork practices can boost productivity among team members and improve the quality of care in the ED. For example, Francisco explained that individual work has limits and may stop at a certain level:

> Working in a team is very different from working individually. No matter how much expertise and knowledge you possess in a certain field, working individually will leave you confined to certain limits that can rupture your productivity. These limits are mostly brought about by an individual's physical and mental endurance levels. Endurance is the term used to refer to a body's or mind's capability to keep up with a certain situation.

Likewise, Adam described the negative consequences of working individually. He believed that when the maximum human endurance is reached, individuals can no longer handle daily activities or even function normally. Physical and mental burnout reduce staff achievement and productivity. He said:

> When the ultimate limit of human endurance is reached, the mind immediately enters a stage commonly known as "burnout." Once in the burnout stage, individuals become unable to handle day-to-day activities or even function normally. The

> physical and mental exhaustion will make these individuals question their identities, reducing their accomplishments and productivity.

Also, Max stated that through teamwork, a group can reach better outcomes and increase their efficiency as individuals can combine their knowledge and remind each other of things during the healthcare procedures. He noted:

> Working as a team can reduce fatigue for the team members and also when working with a team. It helps the members remind each other, especially in medical matters when you want to make decisions such as diagnosis and one of your team members has a better experience, he/she can remind you, alert you, and educate you. Therefore, teamwork is very important. Now, in every workplace, you see teams, especially in the ED, where we really have to work in a team. Working individually, definitely, you will see mistakes; thus, teamwork helps to share ideas.

During the interview, Isabella shared an example that described how teamwork can add to her knowledge and experiences. When she worked with the team, she learned about the work system faster and learned medical terminologies:

> When I work with the team, I learn more about the system and the procedures faster. I always talk with the staff, and I learn from their experiences, and we exchange information. For example, I learned many medical terminologies from the staff.

Similarly, James asserted that working with a team can reduce forgetfulness and highlights the importance of collective knowledge and support:

> The care will be better when there is a team because there will be an exchange of experiences when dealing with patients. Also, patients' fortunes will be better than receiving care individually, even if this person is specialised. Working individually will result in forgetfulness. When working with a team, the rate of forgetting will be lower.

Regarding decision-making, James revealed that working with a team helped him to make the right decisions:

> The decision-making should be done faster in the ED. If I have a good team and good support, I will ask my team about my decisions; are they the right decisions, or do I

> need something else? This makes the decision-making easier for me as a team leader. If I work by myself, that will be difficult for me when making decisions.

Also, Emily clarified that isolation from teamwork may negatively impact the person when making decisions at work. She said:

> There is a great benefit in working with team members who are supportive and communicate with each other effectively. This will contribute to not resulting in isolation among the team members. Isolation can make a person think about his/her personal life and the problems, which negatively affect actions and decisions at work.

The participants expressed their experiences regarding the importance of teamwork in the ED, such as Kai, who stated that:

> In the ED, teamwork is not a choice but an obligation. It is the foundation on which everything else is built. Being supported by a team reduces the negative outcomes that can happen when providing patients with healthcare. It takes more than one person to ensure the patients' safety.

Ben shared a short story about the consequences of working independently in the ED. He highlighted the importance of working with the team in terms of safety, indicating that individual work could harm the worker's health:

> I once had a very ambitious nurse technician on my team. As you know, it is the technicians' job to move and lift patients when necessary, but we make sure they do so in teams to prevent any possible injuries. The technician was a competitive individual and wanted to prove that he didn't need backup from his co-workers, so he lifted a very heavy patient on his own. On the same night, this technician was admitted into the ED. He injured his back while lifting the patient and ended up with a damaged disc. This not only taught him the value of teamwork but also jeopardised his career as a nurse.

Charlotte agreed that teamwork can enhance safety in the ED. She said, "Being in a team helps reduce the number of common errors that can happen and thus increases the patients' safety."

Kai provided an example of how working independently can jeopardise a patient's life as well as negatively influence the employee's health:

> Providing our patients with high-quality healthcare is our priority, and working independently will cause lower rates of patient satisfaction. For example, I was once alone in the ED and had two patients. When I was halfway through giving the first an intramuscular injection, the second yelled in anguish. I knew something was urgently wrong, so I had to rush over to the second patient while the injection was still in the first patient's skin. It turned out that the second patient was having a heart attack and thus needed immediate attention. It all went well in the end, but the first patient filed a report against me. As I said earlier, patients are not responsible for the lack of staff, and they deserve to receive high-quality treatment at all times. Moreover, working independently in the ED puts you under great stress and eventually exhausts you.

Similarly, Smith explained further the consequences of exhaustion, which can impact an employee's concentration:

> I would definitely say I work within a team. Two or more people are always better than one, especially in the ED. Working alone puts the health and safety of patients at risk. When you work alone in a very stressful environment like the ED, you are expected to experience intense medical fatigue. Fatigue makes professionals unable to respond rapidly to patient needs, not to forget to mention that fatigue causes professionals to lose focus, which in turn increases medical errors, mortality rates, and patient dissatisfaction.

Also, Lana mentioned that working within a team can help to apply a greater amount and variety of knowledge to make better decisions:

> Interdisciplinary collaboration brings together specialised individuals from all disciplines. Each of these people has valuable insights and important remarks that, when joined together, can provide a more holistic view of the treatment plan of a certain patient. The effective engagement of these people, consequently, has improved the quality of care provided and reduced medical mistakes drastically.

In addition, Olivia provided an example describing the importance of teamwork regarding time in the ED. She asserted that working within a team can help to accomplish tasks faster, which is needed in the ED to save patients' lives:

> I have come to realise that in the ED, having multiple bodies and brains working for the patient's best interest was the only way to ensure a smooth workflow. I once was

> on a late shift with a doctor and a head nurse. We were the only people on duty in the ED, and we received six family members who had been in a fire and were showing severe signs of smoke inhalation. They were all in critical condition and needed immediate intervention. To prevent any further treatment delays, the head nurse contacted the staff on duty in the other departments and requested their transfer to the ED. In a few minutes, the backup staff arrived in the ED, and we began performing CPR and studying each family member's symptoms. In less than an hour, we were able to stabilise the six family members and transfer them to the ICU to continue the treatment plan as per the hospital's protocols and procedures. You see, this is one of the many examples that make me grateful to be able to work within a team.

In this regard, James also mentioned that working individually can increase the waiting time of the patients, whereby patient health could be harmed:

> If you work independently, you may forget some services such as diagnosis or medication or time. Also, there will be a delay in the services, which will cause many issues, such as patients will be at risk when waiting in the department. Also, patients will be angry if we are late in providing the services.

The participants highlighted that teamwork was essential for improving productivity and emergency care quality in the ED. Teamwork also facilitated knowledge sharing, skill development, and better decision-making by combining diverse expertise, resulting in better outcomes. It also improved hazard identification, reduced stay length, and ensured a safe working environment. These findings are consistent with existing literature that indicates teamwork speeds up emergency service delivery and makes patient care more efficient (Grover et al. 2017).

6.5.2 Sub-theme two: Teamwork creates happiness

In this sub-theme, some participants found that working with a team can make them happy and more engaged. The quality of the interactions among team members, such as helping and exchanging information, were the main elements facilitating happiness when working within a team. Happiness turned the work into a stimulating environment and enhanced the team members' satisfaction at work. For example, Ben shared his emotions and feelings while working with the team. Ben felt happy when he shared success when performing an urgent task with the team:

> When I work with a team, I feel happy, and we share happiness as opposed to being happy alone. When you have a cardiac arrest case and when we perform cardiopulmonary resuscitation (CPR) and bring the patient back to life, this is a beautiful feeling that is difficult to describe to you. Everyone in the team feels the ecstasy of happiness.

Also, Lucas stated that teamwork generates happiness and makes the work exciting:

> I think being with the right team makes this experience even more joyful. During the shift, you come and have staff that are willing to help, and you talk with them and ask questions and sometimes we make jokes and laugh. This makes the shift great, and I am excited to work.

Likewise, Francisco added that working within a team can fill the shift's time with happiness:

> The team members will be happy with each other, and they will perform their work. Sometimes, the shift finishes, and we do not realise that we finish, and we do not feel tired. This is because of the team's spirit, the happiness among us, the collaboration.

On the other hand, William argued that an uncooperative team negatively affects emotions, creating a sense of loathing for the work:

> When I work in a team, that makes me love the work and work with passion. This is if the team is cooperative. Conversely, if the team is uncooperative, this will make you abhor the work and make you not in your full mental and psychological strength. When you work in a team, you all accomplish things together and leave the work happy because you have helped each other.

The findings suggest that they tend to be happier when the staff work together as a team. Teamwork allowed them to feel good and excited about their work, resulting in greater satisfaction. Their happiness was attributed to small things like helping each other and celebrating successes. Working with a supportive team was more enjoyable, interesting, and fulfilling for them. Conversely, when the team did not cooperate well, it could affect their emotions and decrease their enthusiasm. The findings showed that teamwork contributes to a positive work environment and boosts everyone's overall happiness and satisfaction at work.

Similarly, researchers such as Ajeigbe et al. (2014) and Kalisch et al. (2010) found that teamwork improves job satisfaction, especially in the EDs. Research shows that satisfied

employees are happier with their jobs, enjoy their careers, are less stressed, and are less likely to leave (Ajeigbe et al. 2014; Lu et al. 2017). Thus, encouraging teamwork is beneficial for making staff happier at work; it may also help the ED in KSA succeed and retain employees.

6.6 Theme three: Team Members' Behaviour

This theme describes how the team members behave in the ED. In addition, in this theme, the participants explained their experiences regarding the behaviour of team members and its effect on team interactions and the health services in the ED. Four subthemes from the analysis data include disputes, conflict, collaboration deficit, and emotions.

6.6.1 Sub-theme one: Disputes

The participants frequently cited disputes as a barrier to teamwork in the ED. According to the participants' experiences, these disputes negatively impacted team interactions, preventing communication and collaboration and creating an unmotivated ED environment.

However, losing the principle of working within a team, unfair distribution of tasks, incompatibility of some of the members' personalities, and spending longer working hours were the reasons for disputes among the team members. Consequently, the one who suffers the most from these disputes is the patient. Disputes among team members resulted in a delay in sharing information and providing treatment to patients. Francisco shared an example, revealing how disputes have developed and some of the team members sought to harm each other by withholding information from others:

> When there are disputes among the team members and the communication is not there, we actually suffered from these issues, which completely destroy teamwork and put the patients at risk. We have experienced these issues. When there are disputes, the team members start to withhold information from each other to harm each other, which will negatively impact the patients. For example, when they have been asked why you did not deliver the information, they will say that I am not obligated to deliver this information, or sometimes they say I haven't been asked about the undelivered information or this patient is not under my responsibility; other team members have seen this patient, not me. Also, they say the nurse should do that, not me and sometimes the patient's case gets worse, and they say I am not responsible.

Francisco also described the consequences of the disputes that can occur, which can stop the practice of teamwork:

> Disputes, incompatibility, lack of clarity, and lack of communication make the team worthless. This means everyone works alone and has no teamwork. I would say that the team members must communicate with each other even if there are disputes in the workplace.

While identifying the reasons for the disputes, James stated that a lack of cooperative members can create personal issues. He said, “If your colleague is uncooperative, the services will be slow, and this will cause personal issues with your colleague and this will put patients at high risk.”

Shan pointed out that personal issues created a lack of cooperation, and the reasons for the disputes are unknown; he preferred to know the reasons for the personal issues to solve them:

> In the ED, we sometimes have personal issues with the team members. I noticed one team member did not like me and did not know why. I can see that he/she does not want to talk to me or avoids working with me. They do not tell the reasons why they are mad or have issues. I may have made unintentional mistakes which make others mad. They need to talk about the mistakes and solve them.

Francisco also added that personal issues happened because the staff spend much time with each other, which can impact the quality of communication:

> I would say that the staff that work in the medical environment, they work with each other for long hours like a family staying in one house, and issues happen among them, such as the wife and the husband which problems occur between them because they stay with each other all the time. The physicians and nurses spend longer time with each other than their families. This makes gaps in communication. Nothing prevents you from communicating with your colleague except that you have personal issues with that person.

In addition, Adam added to the reasons for the personal issues; he stated that the unfair distribution of tasks among team members could make a person dissatisfied:

> A doctor lets one person do all the services such as diagnosis, x-ray, etc. This person will start to be mad and have issues with the doctor. The distribution of tasks and bad management are the main causes of personal issues here.

Hanan indicated that personal issues that happened among members outside the workplace adversely impacted them at work:

> Most team members meet outside the workplace, and personal issues happen with them. Also, sometimes issues or conflicts that happen outside the workplace they bring them into the workplace, such as in sports teams when you are a fan of a team that lost the game and your team members support the winning team, so this can cause issues among the team members.

The hospital policy confirmed that all staff members must maintain a work environment free from harassment: "All employees are committed to maintaining an environment in which every individual can work and live without being harassed' (Hospital Policy, Policy Number: LED-01-012). This policy is intended to promote a respectful and collaborative work environment. However, the disputes among team members reveal significant obstacles to achieving this target. Due to challenges such as inequitable task distribution, a lack of compatibility of personalities, and long work hours, disagreements between team members created an uncomfortable work environment. Personal issues and unresolved conflicts outside of work also contributed to disputes among team members.

6.6.2 Sub-theme two: Conflict

Conflict as a sub-theme evolved from the team members' experiences when interacting with each other in the ED. The ED receives various emergency cases requiring different specialities to provide health services. Different specialities caused conflicts when making decisions about the diagnosis, which may result in delays in the services and impact the patients' lives. Reasons beyond differences of opinion were cases requiring internal and surgical specialities, long working hours, and stress.

Charlotte provided an example that illustrated how conflict occurs among the team members. She stated that cardiac patients may show up in the ED, which makes the emergency doctor call a cardiologist to treat the case. In this case, there may be differences in the opinions between them, which may put the patient's health at risk. She said:

> The ED is a multi-speciality area. This means the service is not provided just by the ED's general doctor. For example, if a cardiac patient arrives, the general doctor will administer first aid and contact a cardiologist. There may be discrepancies between the doctor and the cardiologist in this situation. They are expected to work as a team, but sometimes disagreements can happen if they share a different opinion on the diagnosis and treatment plan. In the ED, this is a serious issue that negatively affects patient safety.

Emily provided another example of conflict between the internist and the surgeon. She stated that patients with complex health issues may arrive at the ED. Sometimes, the internist and the surgeon are confused and unsure about who is responsible for the case, the internist or the surgeon. Eventually, the medical manager becomes involved and solves the conflict:

> Sometimes, a patient comes to the ED and has complicated health issues and some diseases you do not know if it is medical or surgical, and here the conflict happens where the internist says to the surgeon this case is your responsibility, and the surgeon says no, this needs the internist. At this moment, we call the medical manager and explain to him the case. After that he will decide if the case is medical or surgical. Conflict causes a delay in the services.

Kai found that the stressful environment of the ED may cause conflict among team members. He revealed an example of a conflict that occurred in the ED:

> This usually stems from the overwhelming stress that the members are put under. For example, two of my co-workers once argued about which bed they should place their patient on, and it escalated quickly into a huge fight, so the team leader had to get involved.

Kai mentioned that leaders must be there to ensure that these issues are resolved quickly and without disrupting the treatment process, saying: "There must always be a team leader present so that these problems would be solved right away without impacting the treatment plan."

William had a different view regarding the various opinions of the specialists. He believed that including people from different experiences was great because it contributes to keeping up with ideas and providing quality healthcare. William also stated that whenever there is a conflict, they use the MOH protocols to solve their disputes:

> In the ED, for sure there are multiple opinions; this helps improve the performance and the health service provided to patients. It is about what we are supposed to do like that, and like that, we go back to the protocols of the MOH; this is for the administrative and organisational matters and the pathological and health things. We have a book here for all cases that may come to the Ambulance and ED; we go back to this book if we have a conflict.

It was evident from the participants' experiences that conflict was prevalent, particularly between members of different specialities. As they described, conflict grew in the ED due to disagreements over patient care decisions. As participants highlighted, in the case of patients with complex health issues, there can be conflicts between emergency doctors and specialists, such as cardiologists and surgeons. This can lead to disagreements over decisions, potentially delaying patient care and compromising patient outcomes.

Furthermore, Kai added that conflicts could arise due to long working hours and high stress levels. These types of conflicts are consistent with Tjan et al. (2024), who explored conflicts specific to emergency medicine. Tjan et al. (2024) demonstrated that, for emergency medicine clinicians, conflict generally arises from routine, common tasks such as referring patients for admission, handing them over, communicating, and diagnosing. This indicates that many conflicts in the ED arise from routine tasks in patient care, where team members have different perspectives. However, to resolve conflict, the participants in the study indicated that the involvement of medical directors and team leaders was crucial. Maximin et al. (2015) found that a lack of conflict resolution can lead to life-threatening medical errors, costly litigation, decreased job satisfaction, lack of productivity, incivility, and general stress on the health system. This demonstrates that resolving conflicts is crucial for maintaining effective teamwork in the ED.

6.6.3 Sub-theme three: Collaboration deficit

This sub-theme discusses the lack of collaboration among some healthcare team members, with participants highlighting an unwillingness to occasionally assist each other, creating a lack of teamwork. Due to this lack of cooperation, some duties are not correctly performed. In addition, members' absenteeism or a lack of effort can make it more challenging to provide care for patients and delay providing the necessary support. Hanan described the lack of cooperation among team members as "selfish." Despite being available, she stated that staff

members would refuse to assist their colleagues since they were assigned other tasks. Hanan said:

> When the character of the nurse is selfish, for example, when a nurse works on a specific task, such as critical cases, and no patient showed up, and the nurse is free all the shift, she does not want to help other staff. We work nine hours per shift, and I needed a break and some help, but the other nurse said: "I cannot help because I have my own task."

Regarding the lack of collaboration within the department, Emma expressed similar sentiments to Hanan's, saying: "I see no cooperation in the department here. When I was working in Riyadh, it was different; everyone wants to help."

The lack of cooperation affects the pace of the team's performance, which delays the services provided, and subsequently, the patients will be affected. Hanan added:

> Everyone is selfish; everyone wants to stay in his/her place or task, and they do not have the spirit of teamwork. At this point, as we work for patients, the patients will be aggrieved. It means the healthcare services will be poor, and it may be about life or death, and the service is slow with no quality, and additionally there will be mistakes.

Furthermore, neglect of duties at work was one of the team members' behaviours that emerged from the analysis of the interviews with the team members. During the interviews, the participants revealed that the ED staff members suffered due to the neglect of duties by some team members. Philips provided examples of neglect at work, such as absenteeism and laziness, saying: "I can see that our main problems here are laziness at work and the absences."

In addition, the participants explained some reasons that led to these practices, such as a lack of skills and confidence to treat emergency cases, insufficient sleep, or other issues. Based on the participants, neglect of duties at work caused problems that overwhelmed the staff members, delays in providing services, and overcrowding in the ED.

Francisco said that some team members lack self-confidence, which made them fear providing emergency treatment. Lack of self-confidence made them avoid working in the ED and influenced their relationship with the team members:

> In the ED, the health practitioners fear their competence. For example, the health practitioner does not have confidence in his/her skills to deal with or treat various high-risk cases in the ED. Here, the health practitioner will be stressed and afraid of providing poor services or making medical errors. Because of that, he/she will begin to evade work in the ED, which negatively impacts teamwork. In this case, the members begin to be biased against this health practitioner and say that he/she is negligent at work and lazy, and the fact is that he/she is afraid of emergency cases. This barrier only occurs in the ED because most cases are critical and complex and need immediate services.

Max explained that some team members could be lazy. He believed that the reasons for their laziness may be lack of sleep and that they may have other issues. As Max mentioned, these members could not perform their work to the fullest, creating a burden for staff members:

> Sometimes, you have a lazy team member. For example, he did not sleep well or have other issues and does not work well with us. Or sitting on the chair using the phone, which impacts the team. This person works, but slowly; you will need to help him/her. You will have double work that makes you tired before the shift ends, or there will be a delay in the service because you are doing your tasks and helping this person with his/her tasks.

Ben indicated that if an employee neglected their work, this could cause work overload for the other staff members:

> If some staff neglected, this would double the tasks of the other staff, and you feel that we have a shortage of staff. The duty manager must have a strong personality and be able to manage his staff, which will make the team members satisfied.

The collaboration deficit highlights clear evidence showing that some team members have not effectively adhered to the policy of the MOH, which indicated that “All members, male and female, should at all times practice the principle of modesty and respectable and interaction and proper decorum during activities, gatherings or when dealing with each other” (Code of Conduct and Ethics, Policy Number: LED-01-012). As a result of the lack of teamwork and cooperation among the members of the ED team, it was difficult to carry out duties and provide timely care to patients. Some staff members' unwillingness hinders collaborative work within the department and makes it difficult to assist their colleagues. Absenteeism and laziness also contribute to these issues, resulting in overwhelmed staff,

delayed services, and overcrowding in the department. Factors like a lack of skills and confidence or sleep can cause neglect. In addition, some members avoid ED work for fear of incompetence, causing further strain on teamwork. However, the participants indicated that a lack of collaboration or neglect of duties burdens some staff members, compromising healthcare service quality. Collaboration and teamwork are incompatible with these behaviours.

The lack of collaboration described by the participants underscored the importance of fostering teamwork. Teamwork is the essence of collaboration involving a group of people working together towards a common goal (see Chapter Three). Teams cannot learn and grow without a commitment to working together (James and Bennett 2022). As a result, the collective output is lower than if the individuals had acted alone (James and Bennett 2022). The findings of this study demonstrated a need for a collaborative team atmosphere in the ED of KSA to overcome barriers, promote teamwork, and improve staff and patient satisfaction.

6.6.4 Sub-theme four: Emotions

Some participants described emotions as potential barriers and enablers of teamwork. Several negative emotions associated with negative behaviours were noted to impact the practice of teamwork adversely. Among the emotions participants discussed, stress, being in a "bad mood" or having negative feelings about patients' behaviours were indicated as barriers to teamwork. Conversely, participants viewed positive emotions (good mood) as enablers of effective teamwork. Shan remarked:

> Sometimes, if the team is active, everybody is active and in a good mood. I like that because it makes the workplace happy, and we are excited to work more and deal with everything in the department, but sometimes, when you come, you feel lazy, or some members are not happy. I feel that I just want to do the work and finish my shift, and the shift is normal, and you are really satisfied with the team.

Shan also discussed the negative consequences of being in a bad mood. He indicated that the issue was not limited to the bad mood of one person; this mood can weaken communication and make this person's performance slow and unexciting while working, which results in a gap inside the team:

> Sometimes, if one team member is in a bad mood, he/she may have some personal issues. I try to avoid this person because he/she does not want to talk too much; just

> say a few words. Here, the communication is not that good, and we stop talking. If this happened, this person could impact us, which makes the environment slow and not that exciting; you feel that something is missing. I feel that we have a gap in the team. You may see a delay in the services because we have a gap, which is one person in a bad mood who can not work quickly and talk with us if he/she needs help.

Participants revealed how emotions can hinder and facilitate teamwork positively or negatively. Positive emotions, including being in a good mood, foster conducive work environments, while negative emotions, such as stress and being in a bad mood, are barriers to effective teamwork. Participants noted that a positive and active team atmosphere contributed to increased productivity and job satisfaction. Nonetheless, as demonstrated above, one member's negative emotions hindered communication and performance, leading to a perceived gap within the team. As a result of this individual's disengagement, the overall team morale was affected, possibly resulting in service delivery delays.

Since there is interdisciplinary teamwork in the ED and various emergency cases, disagreements can occur among the members, which could cause delays in providing services. Moreover, participants explained that some team members have shown a lack of cooperation, negative emotions, laziness, and absence while working in the ED. All these behaviours adversely affect the quality of interaction, create a burden in the workplace, and require attention.

6.7 Theme Four: Multicultural Teamwork

The KSA employs a diverse workforce that includes nationalities and professions from a wide range of countries (Al-Hanawi et al., 2019; MOH, 2018). As a result of this diversity, the dynamics of the healthcare industry are significantly impacted. This study found that in this ED, almost nine different cultures are interacting with each other. There are members from Arabic countries such as Algeria, Egypt, India, Sudan, Syria, the Philippines, Tunisia, and Saudi Arabia, as well as staff members from Africa. The participants' responses revolved around three sub-themes: national origin discrimination, belonging and identity, and gender segregation.

6.7.1 Sub-theme one: National origin discrimination

As outlined in Chapter 2, most of the workforce is non-Saudi, notably physicians (60%) and nurses (57%) in KSA (MOH, 2021). Policy, economic, and cultural factors favouring Saudi citizens over non-Saudis regarding job categories, salaries, and benefits influence team members' stratification. Chapter 2 also illustrated that the Saudi government aims to recruit more Saudi nationals in different sectors, including healthcare, through Saudisation policies as part of its Vision 2030 plan (Basahal et al. 2023). However, these policies have sometimes led to international workers being treated unfairly, such as being demoted, given lower job categories, and reducing their salaries and benefits, while Saudi citizens received better treatment. This conflicts with the document evidence found in the current study, which revealed that: “Harassment includes conduct relating to race, colour, gender, disability, religion, age, national origin, and sexual harassment” (Code of Conduct and Ethics, Policy Number: LED-01-012). This indicates that the policy ensures a respectful and inclusive workplace by prohibiting harassment, but in reality, this conflicts with the practices. Philips emphasised this by stating:

> When I first came here, I was a nurse specialist; then, when the management hired some Saudi staff, they changed the foreigners’ job category to health assistants, whereby our salaries decreased, and they gave our job category to the Saudi nurses. Also, we used to have an annual salary increase, but now they stopped this.

This comment confirmed a significant discrepancy between policy and practice. This discrepancy weakened team cohesion and increased divisions based on nationality, negatively affecting satisfaction and causing tension and a sense of injustice, creating workplace conflict. Consequently, some international employees resigned, causing staff shortages. As Philips stated:

> Some foreign staff members are resigning because of these unfair decisions. More than 20 staff have resigned without replacement—there is a lack of staff and no salary increases. We are not satisfied with the salaries. If they increased our salaries a little bit, we would be happy even if we are exhausted or tired at work. Of course, our priority is the patient, but we need the salary to pay for our families. The Saudi staff have double salaries. We need justice at work and no discrimination among nationalities.

The high turnover rate of employees in healthcare can seriously hinder teamwork (Lapierre et al. 2019). Team members continually changing impedes the ability to build trust and to communicate effectively, which are crucial concepts of effective teamwork (Alrabeah et al. 2020). New employees require extensive training, which increases recruitment and training costs (Alrabeah et al. 2020). Additionally, this adds to the workload and stress of the remaining workers who must supervise and train the new employees. Continuous turnover also disrupts long-term team development, creating difficulties in maintaining a cohesive and stable team in the ED (Lapierre et al. 2019).

Furthermore, even though the policy was in place, some team members did not adhere to it. Francisco confirmed that there is racism among nationalities at work as they unite against other nationalities. Staff from similar countries united and simplified tasks, such as handing over tasks, showing contempt for different nationalities, and making things difficult for them. The reason behind this (as Francisco asserted) was the attempt to dominate the department and expel the other nationalities:

> We have a bias in the teams, such as among the nationalities with a group of members with a similar nationality. They help each other and do not help other nationalities. For example, members from Sudan, Syria, or other nationalities control a department, and they do not like other nationalities to be with them. As a nationality, yes, we have issues, but we do not have any issues with religion, culture, or race. Nationalities unite with each other and start to despise other nationalities or do not appropriately communicate with them. For example, when the staff from the same nationality handover with each other, there will be no issues and they sort everything in a great way, but when different nationalities do that with them, you will see many comments and some issues. They do like that because they think that the other nationalities are threatening them, and they will expel them from the place. Sometimes, this happens in the management; when a person from a certain nationality controls the management, they think he/she will terminate other nationalities. I have seen this; I am certain this happens.

Emily added another example explaining how national origin discrimination occurs in the ED. She described how, when evaluating staff performance, members of the same nationality bias one another, but when assessing other nationalities, they considered the evaluation

seriously. Here, the relationships of members were affected, and the effect is long-lasting, as Emily indicated:

> For example, when it comes to job evaluation, staff from the same nationalities make good job evaluations for each other, but when they do it for other nationalities, they will be more serious, and here the personal issues start. Here, the enmity and the problems begin and last for a long time in the workplace.

Francisco suggested that management should be involved in stopping discrimination cases. He said: "the hospital management can solve this by law enforcement and fairness in the workplace. It is the government management that should fight this issue."

In contrast, one participant did not believe they faced challenges with multicultural staff members. William stated that they have a common objective that all religions and races share, which is to serve patients:

> We have multicultural workers here, and we have respect here; you respect the other persons regardless of his/her race or religion. You have a specific goal, which is to serve the patient; this is a humanitarian goal. This is a common goal among religions and the different races.

Based on the participants, the ED had significant issues with recruiting, integrating, and retaining a non-Saudi workforce. The multicultural workforce, affected by Saudisation policies, had experienced significant challenges, including discrimination based on national origin, which negatively affected satisfaction and interdisciplinary relationships. Salaries and benefits imbalance has led to international staff resigning. In addition, discrimination extends to the team level, where employees from similar national backgrounds often unite against their colleagues from other countries, weakening the coherence of the interdisciplinary team.

However, some participants noted that a shared commitment to patient care surpassed racial and cultural divides, suggesting that diversity can be managed effectively if all nationalities were treated fairly. This highlighted the need for management reforms to ensure equal treatment and leverage the benefits of a diverse workforce for the better. Stahl and Maznevski (2021) investigated the implications of cultural diversity on team dynamics and found that, although diversity can encourage creativity and innovation, it can cause communication obstacles and conflict. Stahl and Maznevski (2021) stated that teams must ensure they can draw on diverse backgrounds to foster collaboration and positive outcomes.

6.7.2 Sub-theme two: Belonging and identity

A shared understanding and speaking a common language were critical to belonging and identity within KSA multicultural teams. However, different backgrounds created different languages, work ethics, and values, which could cause cultural barriers. Based on the participants' views, the feeling of belonging while being part of other cultures seemed to be strongly associated with a shared understanding and a common language. For example, Ben explained: "Different backgrounds mean different languages, work ethics, values, etc. Cultural barriers can sometimes make team members feel like they do not blend with the dominant culture. Sometimes foreigners use different vocabulary when you talk with them."

When speaking with overseas members, Kai (a Saudi citizen) noticed that international staff members have different vocabularies or interests, such as jokes or other foods. Because of the differing interests, they will have nothing in common; these disparities weaken relationships and impact communication. Kai said: "These differences make the relationships fragile and impact the communication because you have different interests, so there will be nothing common between you and them."

While observing in the ED, I noticed that team members connected and exchanged more information with colleagues who spoke the same language and had similar cultural backgrounds. In addition, I saw the joy on the members' faces when interacting with colleagues with similar cultures:

Observational Field Note 3

During the observation, I noticed that there was a multicultural team. I have seen staff members from Arabic countries such as Sudan, Egypt, Syria, Tunisia, Algeria, and Saudi staff. Also, there are staff members from India, the Philippines, and Africa. While in the ED, I observed team members interact and share more information with colleagues of similar language and cultural backgrounds. For example, Filipino nurses spent much of their time during work with each other. They communicated easily and faster using the Filipino language, and I could see smiley facial expressions. I noticed a lack of communication and interaction when they interacted with Saudi staff, i.e., they talked less.

Additionally, the Sudanese team members, most of the time when working with each other, communicate with each other about, for example jokes that they understand. When they communicate with each other, it is difficult to understand them because their accent in the Arabic language is

entirely different from the Saudi accent.

In addition, the Saudi nurses sat with each other and started talking about other people and their holidays. Another nurse came to the observation room and started to talk with the nurse in charge of the male observation room in Urdu, which I could not understand. They seemed happy, as I could observe in their facial expressions, and they started to wipe the bed after the patient had left.

Kai concurred with my observation in Observational Field Note 3; he explained that he has a strong relationship and communication with Saudis since they share similar interests: “You find me to have a good relationship and communication with Saudis because we have the same interests; that’s why.” To improve communication among multicultural employees and solve conflicts of interest, Kai suggested: "We can look for common things among us, such as talking about patients’ treatment, and we keep talking about the work.”

Based on the findings, the ED multicultural teams in the KSA experienced significant challenges in developing SMMs (discussed in Chapter Four), which hindered relationships and effective communication. Team members tended to interact more with colleagues who spoke the same language and had similar cultural backgrounds, which reduced the chances of building a shared understanding within the team. Ben and Kai pointed out that fragmentation weakened relationships and damaged communication, which is crucial for SMMs in the EDs (Wise et al. 2021). In the EDs, SMMs allow team members to be proactive, anticipate behaviours, and work seamlessly together, providing fast and effective emergency care (Calder et al. 2017; Wise et al. 2021). Therefore, it is imperative to enhance cultural competence, communication, and mutual understanding among ED team members to develop effective SMMs.

Because cultural diversity in the workplace may contribute to creative thinking that enhances innovation and adaptability (Cletus et al. 2018), cultural differences require cross-cultural training and the establishment of a workplace culture that embraces diversity (Presbitero and Toledano 2018). Saaida (2023) suggests practical approaches such as language diversity promotion and cultural sensitivity training to mitigate interaction challenges. Thus, cultural and linguistic diversity should be recognised and managed to ensure effective interactions.

6.8 Sub-theme three: Gender segregation

As discussed in Chapter 2, Islamic law and traditional norms significantly influence the KSA culture, enforcing gender segregation in many sectors, including healthcare. In the workplace, this segregation has created collaboration challenges between males and females (Aldossari and Calvard 2021; Alghamdi et al. 2022). As Saudi Vision 2030 aims to increase women's workforce participation from 22% to 30% by 2030 and promotes gender equality, religious and cultural norms continued to influence collaboration within the ED. This segregation limited interaction between male and female staff and led to inefficiencies and delays in patient care. This situation demonstrates how progressive policy and traditional social norms overlap, slowing progress in cultural adaptation and limiting the effectiveness of the ED team in the KSA.

In the past, at this particular study site, two EDs were separated entirely, one department for males and the other for females, aligned with the Saudi culture, as the participants explained. Gender segregation had begun to diminish; males and females emerged into one section, and each gender had its own room, as outlined in Table 8 (section 6.3.1), with separate observation rooms for female and male patients. This segregation negatively impacted teamwork and effectiveness. The separation of male and female employees hindered their ability to cooperate and communicate effectively, which was essential for providing quality emergency care. Because of cultural customs, males in the ED avoided female rooms and vice versa, resulting in delays in interactions and treating patients while they wait for same-gender members of staff. Although this gender-segregated design aligns with the culture of the KSA, it presented challenges for fostering the interaction of the ED team.

Adam provided an example of how male staff members provided services to female patients. He mentioned that they occasionally had concerns when dealing with female patients:

> Sometimes, we face issues with female patients. You know the Saudi culture and religion are restricted, and dealing with female patients is a sensitive subject. Sometimes some female patients refuse male staff members to provide the services. In this case, we replace the male employee with the female employee. Also, some staff face difficulties dealing with female staff members, especially on the first workdays; this is a barrier.

Similarly, Alqufly et al. (2019) found that female physicians are undoubtedly preferred in the ED for female patients for gastrointestinal disease, clinical assessment, nonlife-threatening

cases, and physical examinations in the KSA. Nevertheless, they also found there was no gender preference in several situations, such as life-threatening illnesses, psychiatric illnesses, and history taking. The Islamic values that prohibit Muslim patients from seeking healthcare from opposite-sex physicians become less restrictive in life-threatening cases since receiving medical care from the opposite-sex physician becomes permissible (Aldeen 2007; Alqufly et al. 2019). Medical care can be delayed if patients misunderstand or misinterpret their religious teachings (Kulwicki et al. 2000; Padela et al. 2012). As an example, Islamic women who consider themselves highly religious might insist on only being treated by female physicians due to religious prescriptions (Vu et al. 2016). The lack of a female physician can delay treatment, especially in urgent care situations (Vu et al. 2016; Alqufly et al. 2019). Preferring same-gender physicians, particularly for non-life-threatening cases, can result in staffing challenges and delays in care when female physicians are unavailable. As a result, roles and team compositions may need to be changed, which may cause workflow disruptions. As Salas et al. (2015) point out, changes in team roles can result in increased errors, misunderstandings, and, ultimately, performance challenges due to a breakdown in coordination. Based on these insights, effective healthcare in KSA depends on understanding and addressing cultural, religious, and gender dynamics that influence patient preferences and teamwork practices. Indeed, Alqufly et al. (2019) emphasised the necessity of female physicians in the Muslim community to provide more efficient care to female patients.

Nour explained how Saudi females dealt with male staff members. She stated that a few Saudi female employees did not always deal with or converse with male employees because they were embarrassed; men and women, for example, did not always deal with one another due to how they were raised and their families' beliefs. In this situation, those females employed other female colleagues who could talk with males to deliver information. Nour said:

> A few Saudi female staff do not deal or communicate always with the male staff because they are shy, and you know the Saudi culture. I mean, men and women do not always interact with each other because we were raised and taught by our families about that. So, in this case, just a few female members let other female staff who can deal with males deliver or tell them some information about the work procedures.

According to Nour, employing other female colleagues who can talk with males to deliver information can delay the delivery of the information and weaken interaction among the team

members. She said: “This can delay the delivery of the information and result in poor interaction among the team members.”

However, Kai added that they used to have two entirely different EDs, with no interactions between females and males. He found that was beneficial and aligned with the Saudi community culture:

> I remember when we worked in the hospital's old building, we used to have two sections that were completely separated; we had our own section with no females interacting with males. This was great because it was aligned with our community culture here.

Subsequently, Kai discussed the current situation, as a new building had been built, and the two genders were merged with each other in one department. Kai considered this change to be a challenge when interacting with female nurses. He provided an example illustrating that being in the same room with a Saudi female nurse created a challenge. Kai said:

> Now, in this new building, we have one design and see each other. This is still a challenge. I remember one time I faced some shortages of staff members, and I told the head nurse to bring anyone to help me. The head nurse brought a Saudi female nurse; at that time, I provided treatment to the patient and quickly left the room because it was an embarrassment to that female, and one of the barriers that I faced was that I was not close to the patient at that time. I had to watch the patient from outside the room. I did that because I knew this female would not be satisfied if I, as a male, stayed with her in the same room. Sometimes, you understand the person without talking with him/her; you can have a feeling about this person thinking that she does not want to be together. If I stayed in that room, she would leave. I know that, and this means there is no cooperation.

Likewise, my observation aligned with the experiences of Kai and Nour regarding gender dynamics and segregation within the ED. During the fifth observational field note, I noticed that the team practised gender segregation. I observed that a Saudi male nurse was working alone in the patient’s male room, while three Saudi female nurses worked in the female observation room during the shift. There were no interactions between male and female nurses.

Observational Field Note 5

In the ED, all Saudi female staff covered their faces except their eyes, while the other foreign female members wore veils. Covering the faces prevented me from noticing the facial expressions of the female staff while working in the ED.

In the ED, rooms are specified for males and other rooms for female patients. However, I observed only one male nurse working in the ED. This nurse was a Saudi citizen and was always assigned to work in the male observation room and deal with male patients in the ED. While in one shift, three Saudi female nurses were working in the female observation room. This male nurse was performing many responsibilities alone, and it was clear from his facial expressions that he seemed exhausted. Sometimes, this male nurse left his area and went to the Radiology department, which is about 20 metres away from the observation room, to finish some paperwork for his patients, compared with the female nurses who were collaborating with each other when dealing with the female patients in the female observation room.

I noticed that the Saudi male nurse did not interact with the Saudi female nurses while the female nurses were discussing and helping each other. There is an interaction among the female nurses, but it decreases when they interact with male members. For example, Saudi female nurses spent much time sitting beside each other, discussing the patient's status, and sometimes they laughed. In contrast, the interaction between the Saudi female staff and the male staff members was less and in an official way. For example, female nurses received verbal orders from male physicians.

This observation showed that male and female nurses did not interact much, with a separation in physical spaces and communication. This highlighted the role of cultural norms and cross-gender modesty in Islam in shaping workplace dynamics. Female Saudi staff covered their faces and separated male and female patients according to cultural beliefs, reflecting cultural beliefs in practice. In Islam, cross-gender modesty involves the physical covering of the body as a self and Allah (God) respect (Ahmed 2002). Men and women must show modesty in their dress (Saguil and Phelps 2012). Muslim women's modesty in Islam is more sensitive and iconic; separating from other genders is also a form of modesty (Alqufly et al. 2019).

Conversely, James stated he did not face challenges when dealing with the Saudi female staff: "I do not face any challenges when I interact with Saudi female staff, "he said." Everything is fine when we work together."

This statement indicated a difference in experiences when interacting across genders at work. In terms of James' perspective, he seems comfortable and capable of collaborating effectively with Saudi female colleagues. This ability showed that while some faced challenges while practising teamwork, others did not.

However, based on the document evidence in this study, the hospital's policy follows the KSA's culture regarding handshaking between males and females. The policy clarified that it depends on whether females decide to shake the males' hands: "According to the culture rules, males should not start to shake hands with females unless the lady starts" (Code of Conduct and Ethics, Policy Number: LED-01-012). This indicates that the hospital's policy regarding gender separation affected everyday interactions such as handshakes, demonstrating how gender interactions were carefully maintained in the ED.

Based on the findings, gender segregation in the ED created challenges for collaboration between male and female staff, which adversely affected teamwork and emergency care. Despite Saudi Vision 2030's aim to create an inclusive workplace for males and females, team members still face challenges in adopting these changes.

Moreover, international staff unfamiliar with such social segregation may find it challenging to deal with gender segregation, impacting their ability to collaborate effectively (Alsadaan et al., 2021). Segregation can potentially affect communication and delay care delivery. Additionally, it can lead to poor interactions within the team, ultimately affecting patient outcomes (Alyami 2021). Thus, to work effectively in teams in the ED, international staff members need to understand and adapt to these cultural norms.

6.9 Summary of the Chapter

This chapter has provided an in-depth analysis of team dynamics in the ED in KSA as part of a qualitative single case study. The key findings were that the participants perceived teamwork as fundamental to increasing productivity, patient safety, and satisfaction for both patients and staff. For example, Max, Francisco, and James highlighted the role of teamwork in improving productivity and creating a positive work environment, which contributed to reducing stress. In addition, teamwork generated a sense of joy among staff members. Further, Francisco highlighted that working alone has limitations, emphasising the value of interdisciplinary teamwork over individual efforts.

Moreover, this chapter revealed the major barriers the ED team experienced in implementing effective interdisciplinary teamwork. These barriers included a multicultural workforce, negative behaviour from some team members, and the absence of an effective management role in providing teamwork training and fairness. The current findings showed that in contrast to the prescriptive claims that interdisciplinary teams improve efficiency and collaboration (Nancarrow et al. 2013), simply gathering members together does not guarantee they can collaborate effectively. The findings demonstrated that, in the ED, teams sometimes exist in name merely, lacking objective evidence of collaboration. For example, the participants illustrated a variety of behaviours that influenced teamwork effectiveness, such as conflict and disputes. For example, Francisco highlighted an issue where interpersonal disputes led to intentionally withholding information among team members, hindering team cohesion and putting patients at risk if the information did not arrive promptly.

Further, the chapter discussed the challenges a multicultural workforce faces in the ED, where cultural and linguistic diversity challenges effective teamwork. Philips mentioned discrimination based on national origin, and Kai shared struggles with belonging and identity, showing the barriers that multicultural interdisciplinary teams experienced. Moreover, the Saudisation policy has caused dissatisfaction among many international employees since it prioritised local citizens for employment opportunities. As a result of this, international staff members received lower benefits and salaries despite their contributions. This change has impacted the motivation and retention of international employees in the ED, negatively influencing team coherence.

The data also revealed how the unique sociocultural context and the segregated work norms negatively impacted the quality of the interdisciplinary team. For example, in Adam's story, where female patients refused care from male staff, which unexpectedly forced the ED team to change roles and created delays. In addition, although Saudi Vision 2030 aims to increase women's participation and promote gender equality, such as integrating buildings and reducing segregation in EDs, traditional gender roles continued to influence team interactions. This was demonstrated by Kai's challenges in remaining in the same room with a female nurse due to cultural norms. Although these changes were designed to improve a more inclusive workplace, the participants illustrated the challenges of balancing cultural norms with effective interactions.

The findings support the KSA's Vision 2030 by revealing the current status of gender interactions, multicultural workforce challenges, and teamwork's role in improving emergency care. Most studies in the literature (see Chapter Four) highlight the importance of team members' behaviour as both enablers and challenges to effective teamwork in EDs. However, these studies often lacked in-depth exploration of barriers such as disputes and conflict among interdisciplinary teams. They did not examine the impact of a multicultural workforce on teamwork in EDs. This study found key barriers such as conflict, cultural diversity, and limited management support as major challenges to team collaboration. Reeves et al.'s (2010) conceptual framework highlights these relational and organisational factors, especially diversity, gender, and conflict, providing a useful lens to interpret and compare the current findings. Thus, the discussion chapter will use this framework to compare these real-world challenges with the theoretical foundations and the international literature, focusing on their importance to KSA. However, the following second findings chapter discusses the environmental and organisational factors that influence interdisciplinary teamwork in the ED.

CHAPTER SEVEN: THEMES 5-7

7.1 Introduction

This chapter presents findings concerning the various factors surrounding the team that critically impact the quality of team members' interactions and the health outcomes in the ED (Themes 5–7). Participants in this study explained that working in the ED environment differs from other workplaces and affects their interactions with each other. Additionally, the organisational factors of the ED played an essential role in controlling the effectiveness of teamwork. Further factors revealed from the participants' responses were the behaviours of patients and their families towards team members and the extent of the impact of this behaviour on the quality of emergency health services in the ED. The themes and sub-themes presented below discuss these factors in detail.

7.2 Theme Five: The ED Environmental Factors

The environmental factors of the ED significantly impacted the practice of teamwork and the team members. Participants explained that the ED environment differs from other health departments. Three sub-themes relating to the environment of the ED were revealed: working in the ED is different, a shared purpose, and the physical environment.

7.2.1 Sub-theme one: Working in the ED is different

In this sub-theme, the participants explained how working in the ED differs from other health departments. Some, such as Francisco, argued that the unpredictable environment of the ED strengthened relationships among team members and created opportunities to learn and gain experiences:

> The benefit that I really like about the ED is its unpredictability. Some people might see this as a disadvantage, but it’s a blessing in disguise. The unpredictable environment of the ED adds spontaneity and variety to the lives of the people working there. I do not know about the others, but I cannot handle a job where I am obliged to do the same thing every day. Research has shown that routine in the workplace kills productivity and stifles creativity. Unfortunately, when boredom sets in, employees

> quit. In the ED, however, that is not a problem at all. Every new day brings about new challenges to learn and grow from.

In contrast, James viewed the unpredictability of the ED cases as a challenge, feeling that sometimes they receive patients who are beyond the team's abilities:

> It is the face of the hospital that receives all cases. Here in the ED, you see unstable patients and cannot predict the type of cases that will come to the ED. Sometimes, we receive cases that are beyond the capacity of the staff, especially here with us.

Smith felt people outside the ED could not recognise the department's friendly environment. He believed that working in the ED for a more extended period makes the team members accustomed to this friendly environment, and consequently, they do not have the desire to leave the department:

> Team members who have worked at the ED for a long time may be unable to leave the department because they are used to the friendly environment. People from outside can't notice the friendly environment among the team members. This is an important element when creating a team. The friendly environment can overcome the barriers among the team members.

Francisco believed the difficulty of the cases in the ED made team members support each other. Also, he mentioned paying attention to the team members regarding the difficulty of the cases promotes team affiliation:

> I would say the tragedies that happen in the ED. These incidents make us aware of the need for each other and the value of the time and effort we invest while helping others. When you become so focused on the things that add meaning and purpose to your life, you'll develop a sense of belonging to the people sharing your mission. That's why I personally like working in the ED out of all the other departments. That's so heartfelt.

Max added that the stressful environment of the ED allowed team members to share their experiences and support each other. Therefore, teamwork was better because of the pressure and the tragedies:

> The emergency [department] is a stressful environment, and if we work in a team and understand each other and understand our languages that can facilitate the work. We

> are here different from the medical and the management departments because here in the ED, you need support and opinions from the senior nurses; even though I am a doctor, sometimes I need to ask the nurse for suggestions. Sometimes, stress makes us closer to each other no matter what our job roles are.

7.2.2 Sub-theme two: A shared purpose

The second sub-theme that emerged from the data related to experiences around staff members working effectively as a team. In this sub-theme, some participants revealed their experiences of effective teamwork and explained how they practised it. The participants reported that there were three times when the team worked effectively, and the interaction among them increased: crowding, emergency cases, and cases with multiple symptoms.

In terms of crowding, the first participant, William, explained that as soon as the ED is overloaded, team members begin to function effectively:

> Working in a team means working for the benefit of the group as a whole. We all have a shared purpose, and we try our best to contribute to it positively. I feel closest to the team when the ED is crowded. This doesn't have a certain time because the ED is unpredictable. When the ED is overloaded, we immediately begin working effectively as one unit. This includes the participation of different specialists and professionals.

Adam illustrated that crowding in the ED revealed the strength of the team. Adam also explained that fast-paced teamwork was crucial to delivering the required care:

> If the department is crowded, here you can notice the strength of the teamwork because you can see if there are communication and accomplishment. Also, in car accidents, you will usually have more cases come together, and here you can notice if you have good teamwork. In these cases, we need to work faster with the ED team, for example, do the x-rays and deliver them faster to the physicians to speed up the decision-making. For example, one team member sees the patient and takes the personal information; another team member does the x-ray; and two or three take the patients to the computerised tomography scan room and help each other there. This is the cooperation in which we complete the services faster, and the patients will not wait long.

Adam and William's data supported the notion that overcrowding improves teamwork. They agreed that interdisciplinary teamwork was a helpful approach to reducing ED throughput times. Additionally, James added that critical or emergency cases made the team members work together as a team. He said: "This happens when there is a situation that is about life and death, such as cardiac arrest or accident." Shan also added that cases with multiple symptoms made the team members work more cohesively:

> When there are cases with a set of symptoms that need a second opinion, we come together, and we take the health history and what needs to be done for the patient, such as lab work or give some medication. In this case, the team gather, and we suppose, for example, we do some procedures for the case with the team leader, and we start to take care of the case. Also, if we have many cases, you can see teamwork here, too.

Max clarified how the team members worked in practice and how they distributed the tasks:

> We begin by forming the team. A rapid response team consists of an emergency doctor, a surgeon, a cardiologist, and an anaesthesiologist. We used to reach out to members through pagers, but now an announcement is made using the hospital's microphone. After forming the team, we prepare the bed and all the needed equipment. By then, the patient would have arrived, and that's when we came together as a team. Nurses play a key role in the rapid response team. In a level 1 case, at least five nurses are needed to assist the doctors.

7.2.3 Sub-theme three: Physical environment

The physical environment played a role in influencing the practice of teamwork, which can create barriers and enablers in the ED. One observation (Observational Field Note 1) was that the physical environment of the ED simplified the work of the team so that the team could reach each other and reach the patients faster:

Observational Field Note 1
The ED physicians, physician assistants, and nurses all worked in one nursing station. The nursing station was large enough to accommodate multiple team members and had enough appropriate space and dimensions for carrying out diverse activities. I noticed this enhanced communication,

coordination, collaboration, and leadership and helped the team members to decide about the patient's status faster. Meeting in the nursing station allowed team members to find each other easily and deliver information faster.

About five steps from the nursing station, the staff can walk among the two observation rooms, resuscitation rooms, and the nursing room. They could hear each other clearly and ask for backup quickly. This helped the staff spend less time on wasteful activities such as searching for supplies or excessive walking. Less time was spent walking and delivering the information about the admitted patients.

However, Ben complained about the distance to the other departments, such as radiology and the laboratory. This distance was considered a challenge, requiring extra effort for nurses. Ben pointed out that walking long distances outside the ED to complete emergency services was found to be a barrier to team members:

> The distance between the departments is far, such as the radiology department on the right of the hospital and the laboratory on the west of the hospital. Because the nurse is responsible for checking with them, when the nurse leaves her/his department and walks a long distance, this is annoying for the nurse. This adds extra effort for the staff.

Kia explained the design of the physical environment of the ED. According to Kia, the ED was physically laid out so that all areas were close to each other, allowing ED team members to find and communicate with each other faster:

> Actually, the ED is split into several sections, each with a specific group of nurses assigned to it. These sections include but are not limited to triage, resuscitation area, patient waiting area, observation units, and our brand new COVID-19 site. Each area is split into two parts, thus dividing the males' section from the females' section. The areas of the ED are close to each other, which helps us find each other faster.

Ben also supported the advantages of the design of the physical environment of the ED by adding that having nursing rooms was a beneficial element since it allowed them to take a break and enjoy work:

> I forgot to tell you that the nursing room or any rooms for the staff is one of the positive things to relax in this room and take a break because this is our second house. I will spend my life in this place. I need to be satisfied to produce. Sometimes, if we do not have patients and we are free, why shouldn't we sit in this room and drink a cup of tea? You feel that you are comfortable, and that will make you excited to work.

In the above theme, I represented the participants' views about how the work environment factors influenced the team members. Participants viewed the ED as an educational opportunity to learn about different health issues and build relationships with the members to support and complement each other. Besides that, the participants clarified that the ED environment requires rapid performance that enhances the ability of the team members to act faster and provide emergency care. Furthermore, the physical environment of the department contributed to making the team members locate each other quicker, which added pace to the interactions and services.

7.3 Theme Six: The Organisational Factors

This theme outlines how the ED's operational attitudes significantly influenced team members and the practice of teamwork. In addition, the theme identified that certain organisational factors greatly affected the practice of teamwork and the quality of health services: shift work, shortages, and management deficiencies. These factors are described below.

7.3.1 Sub-theme one: Shift work

Shift work played a role in the comfort and mood of the team members. One participant viewed the different shifts in the ED as helping the staff members select the appropriate shift, and the shift work option also helped them balance their lives. In contrast, another participant believed that changing working hours can impact the well-being of the staff members. However, to understand the period of each shift, Isabella mentioned, "In the ED, we have a shift system where the staff usually work eight hours each shift. This is a general view of the work in the ED."

Lucas described his feelings regarding the working hours in the ED. He viewed the different shifts in the ED as allowing the staff to select the appropriate time to work. This helped the

staff not to neglect their private lives, which positively impacted the team members and provided them with the energy to work:

> Flexible working hours are another benefit of being in the ED. For example, I, for one, abhor morning shifts. Having the capability to take over only night shifts and plan my schedule accordingly has made a great difference in my personal life. As a director, I try never to forget that every employee has obligations and responsibilities outside the workplace. Flexible working gives employees the freedom to balance their work-life schedules and submit to their subsidiary roles, whether they are parents, caregivers, or partners. Flexible working has been proven to support mental health and reduce absence rates. You come to work satisfied, and you miss the work and the team members; when you come satisfied, you will have the energy to provide the services in the work.

In contrast, James argued that changing shifts was a challenging element which negatively impacted the mood, health, and performance of the team members:

> In the ED, sometimes we work on the morning shift or evening shift or at night shift. This negatively impacts our mood and our circadian rhythm, and changing the shifts makes our bodies tired. Further, the ED staff have sleep disturbances and changing the shifts prevents you from having a social life, such as your days off being different from your family's days off. All these things can stress the team members and negatively impact their performance and interaction with others. The staff will be lazy, and you can notice they are not active with each other.

Based on the findings, some participants preferred the flexibility of shift work, as it allowed them to balance their work and personal lives, which improved their mood and energy. In contrast, others reported that changing shifts disrupted their sleep, health, and social lives, resulting in stress, lower performance, and less interaction within the team. Thus, providing a flexible schedule that meets staff members' preferences can help maintain effective ED teamwork.

7.3.2 Sub-theme two: Staff shortages

Staff shortages were described as a major barrier that negatively impacted team members and the delivery of services. All the participants admitted that there was a staff shortage in the ED. Philips reported that the main issue they faced in the ED was shortages: "Our main

problem here in the ED is shortages." Yousef explained the reasons why the ED needs more staff:

> We have a basic point in the work in the department that we should have the number enough to receive cases. I see that the emergency is like an open book. For example, if a car accident occurs and 30 people are involved and the number of team members is small, you will face many issues and cannot provide the required services, like when you have enough team members.

Philips provided a reason that caused shortages, indicating that some Saudi nurses were working in offices rather than in direct patient treatment roles. He said: "Usually, some Saudi nurses work in the offices, which causes staff shortages." Francisco added that staff shortages are a worldwide issue. He also indicated that a one-minute delay in the ED could significantly influence a patient's life: "The issues of staff shortages," he noted: "are national and global, but there is a minimum level, and we may be under the minimum level in the shortages. Delay in the services and being one minute late in the ED can impact a patient's life."

I also directly observed a shortage of staff. While conducting Observation 3, only one nurse was dealing with four patients simultaneously. This nurse was clearly dissatisfied with the situation and mentioned that the problem of shortages is permanent:

Excerpt of Observational Field Note 3

I arrived at the ED at 6:00 pm to conduct the observation. There was nobody in the medical station when I arrived. After that, I checked the observation rooms (males and females). On my way to the male observation room, I found four patients in beds and one nurse.

Only one nurse was working in this observation room and was very busy interacting with these patients. She prepared documents that contained information about the patients and, at the same time, prepared drugs. She looked at me and said that she was only working here, and today, four patients came at the same time, and we always lacked employees.

To identify the consequences of the staff shortages, Adam stated that shortages overwhelmed the staff and affected the health of the staff members:

> We have staff shortages and try to cover that by working harder. Shortages make us more tired. The hospital may receive about 50–60 cases in one shift. If there are staff

> shortages, it will cause pressure on the employees, and this pressure will cause pain, whether psychological or physical.

In addition, Kai confirmed that a lack of team members can increase the length of stay, negatively impact patients' moods, and threaten patients' lives. On the other hand, Kai added that the shortages can exhaust the staff, which may make them abhor the work:

> Lack of staff can often lengthen the patients' stay, thus resulting in their frustration and dissatisfaction. Also, a hospital that has a high patient-to-staff ratio is more likely to experience high mortality rates. For example, if you have ten patients, you cannot serve them in one hour; for example, you will need two hours, so this will cause a delay in the service. Normally, you will have defects, but if you have the needed number of staff, you will serve the ten patients at the right time. This also will make patients wait in the waiting areas for hours. The second thing I would like to add is that the staff will be exhausted because when they finish a patient, they immediately go to the other patients and so on; look at this patient and this patient, so this will make them exhausted. Even in the future, the staff will not have the ability or passion at work. I can see that the biggest obstacle we face is the shortage of staff.

Max described that enough numbers of staff positively reflected the mood of the team members:

> It depends on that; if the number of team members is enough, I will be so happy. You come to do your job with your colleagues, and they will help you. No matter if the ED is crowded since you have enough staff. Even if you are physically tired, you go home satisfied because you accomplished something with the team. Enough numbers of staff will cooperate, provide you with smart ideas, talk with them during the shift, and reduce the pressure on the patients and your stress as well.

Francisco mentioned they sought help from another department to solve the shortages: "Sometimes, to solve this issue, we bring staff from other departments to help in the ED." However, James found that staff from other departments had a lack of knowledge of the processes and services in the ED, which could cause a delay in the emergency services:

> When we bring other staff from other departments because we have shortages, these staff are not familiar with our procedures in the ED. You will see delays, and they will not understand what we mean if we order something. For example, when the staff

> from other departments came and tried to do casting for the patient's foot, they did not know how exactly to do that, and they did not know about the cast's layers. They will start to ask many questions about how to do that. Also, if those staff are asked to bring a specific size of a string, they do not know how to distinguish among the sizes of strings.

Based on the findings, staff shortages posed a significant challenge to the ED, affecting both teams and patients. In addition, as explained in Chapter Two, the KSA's population is expected to reach 39.8 million by 2025 and 54.7 million by 2050 (Sajjad and Qureshi 2020). This growing need demonstrates the urgency of addressing staff shortages to ensure effective and timely emergency services.

As discussed in Chapter Two, under Vision 2030, the KSA aims to improve its healthcare infrastructure and access, but the workforce has struggled to meet the current demands. High turnover among international workers and slow Saudisation progress (Al-Hanawi et al. 2019) have left the ED understaffed, leading to long wait times and heavy workloads for the existing members. This study found that the staff shortages strained workers' physical and mental well-being and affected the quality of emergency care provided in the ED. The current findings support Saudi Vision 2030 by showing staffing issues that affected the quality of the emergency services. Thus, reforms are needed to resolve the staffing issues in the ED.

7.3.3 Sub-theme three: Ineffective management

Some participants reported that there were some defects in the management, which were identified as barriers to teamwork. Based on the participants' statements, the ED management practised nepotism, was unapproachable, and disregarded staff shortages. According to Philips, ED managers did not pay attention to some of the team members' issues, such as staffing:

> Usually, if we have problems here and we talk with our leader in the hospital or department, sometimes, they do not help solve our problems. Even if you tell them or write many papers, many complaints, or many problems, they solve only a few problems. The main problem in this hospital is the staffing.

Emily added that the management practices nepotism because they showed favouritism toward one's family members or friends:

> Sometimes, there is a bias from the management when they prefer people over others. This is because of nepotism, such as some staff members knowing the management staff members as if they are their friends or relatives. In this case, they start to provide them with benefits such as flexible shifts and transfer them to the places that they like to work in; also, they speed up the administrative process to complete their services.

Likewise, Kai confirmed favouritism in the workplace when he mentioned: "It is possible, such as favouritism, which prefers one person over another. For example, the team leader prefers one person and does not want another person."

Kai also added that the management was unfamiliar with the staff work schedules and the distribution of responsibilities:

> One obstacle that is not only affecting me but my entire team as well is ineffective management. Hospital leaders need to be realistic when it comes to workload and the distribution of responsibilities. Every individual has certain capabilities, and team leaders need to consider them. If I were to specify our leaders with this answer, I would say that it is because they are unfamiliar with our schedules. This makes us feel overwhelmed and as though we are not valued as individuals.

Ben described the management as unapproachable. He said: "Another problem is that our hospital management is unapproachable. The manager is the person that everyone looks up to. He/she has to be a part of the team and thus listen to our concerns and suggestions."

Isabella experienced a collective punishment and described it as poor management:

> For example, one of my co-workers once gave a patient the wrong medication. On the second day, we were all given an extra shift to account for this error. Collective punishment is just another example of poor management. It hurts top performers and makes the employees resent the employer.

Lastly, Yousef explained that the management did not consider the opinions of the team members regarding the decisions that directed the ED:

> For example, sometimes the management imposes an official decision that we are not allowed to refuse this decision and cannot discuss it with them. They need to listen to us because sometimes this decision is inappropriate for the ED services and may be

appropriate for other departments. For example, the number of staff working in the ED is short.

Based on the participants, the ED teams experienced a major challenge with ineffective management that negatively influenced teamwork and service delivery. Chapter Two reported that while the KSA has rapidly improved infrastructure and technology in the healthcare sector, the ED struggled with management practices. The participants stated that favouritism and unresponsive management led to unfair working conditions, causing frustration and dissatisfaction among staff members. This lack of support from the management hinders Vision 2030's goals to develop an effective healthcare system and support its workforce. Based on Kossaify et al. (2017), approachable and fair management practices promote open communication, trust, and psychological safety, which are crucial for effective teamwork. Thus, a culture of effectiveness and fairness in management practices is essential to enhance teamwork and ensure effective emergency care in the ED.

7.4 Theme Seven: Patients' and Families' Behaviour

Different types of patients attended the ED, which caused challenges for the team members. Violent behaviour and misuse of ED services were the most common issues that impacted teamwork. These behaviours strained the resources and increased stress and burnout among healthcare professionals in the ED, further reducing its effectiveness and efficiency.

7.4.1 Sub-theme one: Non-urgent patients

As discussed in Chapter 2, although Saudi citizens have access to alternative healthcare services such as PHCs, UCCs, and telemedicine, they often depended on the ED for non-urgent conditions. As highlighted in Chapter Two, patients can access EDs in various ways, such as self-referral, ambulance services, or referrals from PHCs. However, this study found that this flexibility often led to the admission of many patients who were not urgent. This study also revealed some reasons for patients using the ED, including a lack of awareness about diseases and health services, free emergency care, seeking sick leave, and receiving services quickly. These factors have contributed to significant challenges like overcrowding and resource drain. Misusing the ED services also caused frustration and added unnecessary responsibilities, negatively impacting team morale. Emily highlighted this:

> The ED is visited daily by an excessive number of patients with non-urgent conditions. Treating these patients is seen as a misuse of the ED since its main purpose is providing emergency medical treatment. They overcrowd the ED and reduce the quality of care provided. Non-urgent cases are considered a waste of healthcare providers' energy and time. They won't be able to give their best if an emergency case shows up because they are already drained from the minor work.

During the interview with James, he noted that the free delivery of healthcare in the ED was one of the factors that attracted many non-urgent cases to the department:

> Receiving cold cases in the ED. If you receive non-emergency cases, you drain the energy of team members who are already tired—for example, changing finger dressing or having a normal headache. Normally, level four and level five patients drain the team members' energy. These patients need to go to other departments to receive treatment. Sometimes, patients come to the ED for consultation or just to obtain medications because the medications are free here.

Non-urgent patients sometimes lacked awareness about diseases and health services. Therefore, they attended the ED and requested services that they believed were appropriate for their conditions. Based on Max, spending time with these patients wasted the team members' time, energy, and resources:

> Sometimes, patients come to the ED with misconceptions about the medicines or the services. For example, one patient has pain in his neck, and he said I heard that the magnetic resonance imaging will help me to know what is happening with my neck. So, here, the patient will insist on receiving magnetic resonance imaging. In this case, we will waste our time with this person, or the non-urgent cases will waste our time, our power, and resources.

The behaviour of some patients caused distress for some team members in the ED. During the observation, I noticed the behaviour of a patient who was waiting in the ED. The patient pretended to be very ill and attempted to have the attention of the ED team. They approached him and spent some time evaluating the case. They found the patient dishonest with the goal of accessing services faster. See Observational Field Note 5 below:

Observational Field Note 5

One patient was sitting in the waiting area, and suddenly, he fell to the ground and became so tired. At this moment, the team promptly placed him in a wheelchair and transported him to the resuscitation room. He was accompanied by two nurses and the team leader, a physician. They started attempting to wake him up, and then the physician checked his heart beating and breath to identify the issue. Suddenly, the patient awoke and talked to the team. Subsequently, they determined that the patient was lying, and he wanted to be served quickly and obtain a sick leave. The team members had experience with this behaviour, and they informed him that "you are not the first one who has lied and scared us."

This event ended with negative feelings shared between the leader and the team members. This patient made the team members busy and worried about him. This resulted in additional and unneeded responsibilities and frustration among the team members.

William revealed that non-urgent cases the ED because they can receive services, consultations, and prescriptions promptly: "In the ED, patients quickly receive services, consultation, or medications; that is why non-urgent cases come to the ED."

According to the findings, while alternative healthcare services are available, patients often underutilised them. PHCs, for example, provide routine and non-emergency care and are available and spread across the country. Apparently, public health education is needed to increase awareness and use of these services. PHCs and telemedicine could effectively manage non-urgent cases and prevent unnecessary usage of the ED.

As highlighted in Chapter 2, the Saudi government aims to increase the number of patients treated within four hours of arriving at the EDs. Self-referral patients challenge this goal, as non-urgent patients overwhelm the ED, increase staff workload, and influence emergency care quality. Often, self-referral patients visit the ED based on their assessment of their health conditions, even if they did not need emergency care. They preferred the ED services because they were easily accessible without prior appointments, free services, and the need to obtain sick leave.

Furthermore, the findings indicated that a lack of awareness among patients regarding proper healthcare use exacerbated this issue. For example, Max identified that: "one patient had a pain in his neck, and he said I heard that the magnetic resonance imaging will help me to know what is happening with my neck. So, here, the patient will insist on receiving magnetic resonance imaging." This indicates that the patient seeks advanced diagnostics without realising that these requests may not be appropriate for non-emergency cases. Similarly, Alnasser et al. (2023) found that 61.4% of the total ED visits (30,737) were categorised as less-urgent or non-urgent at King Abdullah Bin Abdul-Aziz University Hospital in the KSA. These visits included routine examinations, prescription refills, and upper-respiratory symptoms, all of which can be addressed by PHCs (Alnasser et al. 2023). Based on the participants, because of these cases, team members shifted their attention away from real emergencies to manage non-emergency conditions, such as headaches or medication refills. This wasted resources and increased staff members' workloads.

Based on the documentary evidence found (see Table 9, section 6.3.2), under Category V-nonurgent, these procedures can be performed in less critical care settings. This indicates a critical gap between policy and practice due to these challenges. While the policy aims to make care more efficient and maximise resources by redirecting non-urgent cases, non-urgent cases still use the ED's resources. This negatively impacted the ED's teamwork dynamics, resulting in frustration among staff members. Therefore, non-urgent patients must be transferred to the appropriate health services and taught about the appropriate use of emergency services.

7.4.2 Sub-theme two: Violent patients' behaviour

Violent behaviours had a considerable impact, affecting the health and safety of the team members and their provision of services. Alcohol users, patients with mental health issues, and individuals who did not show respect to team members visited the ED. As Kia mentioned, violent behaviours could cause fear in the team members, which can cause turnover. Also, violent behaviours could obstruct services in the ED:

> The nature of the ED is that it receives any patient from outside who may be drunk or have mental issues. These patients use violence, which negatively affects the psychology of the members, and then the staff leave the ED because of fear. We have security, but still, there is violence. Doctors were beaten and insulted in the department. This behaviour prevents doctors from providing services in the ED. For

example, doctors sometimes say, I will not enter that room because there is a violent patient, although this doctor needs to provide a service for another patient in that room.

In addition, the harm caused by the violent patient did not solely affect team members. It also affected the practice of teamwork. Dissatisfied ED patients strongly influenced the team members' psychology, resulting in ineffective communication among the team members. Ben described this situation:

> If the patients are unhappy, they will create a bad environment in the ED, and that will negatively impact the team members' moods. The team members will be nervous and unhappy, which could impact communication; we will see poor communication among the team members if they are in a bad mood. Also, when the staff finish their shift and go home, they will keep thinking about the bad behaviours of the patients.

In discussing reasons for violent behaviours and their impact on the team members in the ED, Adam stated that patients may become angry when asked to rerun tests. He described how their outbursts may make the staff members feel negative about their experiences in providing medical services:

> Sometimes the radiologist makes mistakes while doing x-rays for patients. The reason behind this mistake is that the patients move a lot. When we come to solve this issue, the patient will get angry and start to think that the employee is inexperienced and start to say bad words to that employee. This causes frustration for this employee, and in this case, we try to contain this for our team member and try to motivate him/her and say, for example, you worked, and this is the patient's mistake. This helps motivate the team members, and they will learn how to deal with patients. Some patients throw bad words that affect our psyche while working.

It seems that not only patients were violent, but patients' family members also showed aggressive behaviour towards the ED staff members while providing emergency care. This could be due to the excessive concern of the patient's family because of their patient's emergency condition. Charlotte described this:

> We face more challenges when dealing with patients and their families than with each other. Most of the patients we admit arrive with a family member, who is usually very difficult to deal with. Families of critically ill patients are too vulnerable, and that

> makes them angry, unresponsive and hostile. It is very hard to focus on the patient when a family member is fighting you verbally in the same room.

While conducting Observation 4, I found a reason for the aggressive behaviour of a patient's family. During the observation, I noticed a patient's father became nervous because the doctor was not present, and he asked for help from the team leader, but the leader remained very calm and did not respond to him. This situation irritated the father, who then began to yell and curse the team leader:

Observational Field Note 4
I noticed that in the male observation room, a patient and his father were waiting for the doctor to provide the necessary care. The patient had abdominal pain, and the doctor was not there. The patient's father was so worried about his son that he went outside the room, found the team leader and asked him to check his son's health. The team leader did not interact with the patient's father; he was very calm, which made the patient's father aggressive and verbally abusive to the team leader. The team leader ignored this father and started to walk away without any task. The patient and his father waited another 10 minutes before their doctor arrived.

The perspectives of patients and their relatives were that the ED services were quick, and they disliked waiting to receive treatment. These perspectives have created disrespectful behaviour toward teams in the ED. Adam provided an example:

> For example, when patients and their relatives come to the ED, they are stressed and just want to get the treatment as soon as possible and leave the hospital. They think we are not busy and do not think about other patients. So, they became mad and start to say bad words to the staff.

Ben, an ED team leader, has investigated patients' satisfaction levels and found that poor communication between the staff and patients results in dissatisfied patients:

> Sometimes, patients do not understand the staff, and the staff spends a little time with the patients in the ED. Then, the patients become dissatisfied with the staff because there is a misunderstanding in the procedures. I start to go to the staff members and talk about this matter, and I try to let them speak more with the patients until everything is clear.

As Ben confirmed, an understandable explanation to patients facilitated interactions with patients. It contributed to satisfaction for patients and providers in the ED: “When the staff explains things to the patients clearly, they will not just satisfy the patients, but they will also be happy because their patients are left happy, and everything is clear.”

As I observed, although the MOH has imposed a penalty on any individual who verbally offends or attacks health workers, the abuse continued to occur in the department. During the observation, I observed that:

Observational Field Note 5
There was a sign in the ED stating that any verbal or physical abuse against health practitioners would be fined 1 million riyals (266602,68 USD) or lead to imprisonment for ten years. This sign was hanging on the front of the nursing station and was written by the MOH.

The findings of this study demonstrated that interactions among healthcare workers, patients, and their families negatively influenced the ED team dynamics. High-stress situations such as the critical illness of family members have led individuals to behave aggressively towards ED team members. For example, a patient's father became verbally abusive to the emergency team after he experienced delays in treatment.

In KSA, families are sometimes involved in the decision-making. Alfahmi (2022) found that family-centred medical decision-making has ethical issues in KSA, as cultural norms often limit patients' autonomy, especially male relatives. Male-relative guardianship practices have contributed to weaker protections of patient autonomy, particularly for women (Alfahmi 2022). Although guardianship mainly relates to protecting and supporting dependent individuals such as children or the disabled, in KSA, this protection extends to wives, daughters and even senior family members (Alfahmi 2022). As a result, male relatives often override female and elderly patients' autonomy in medical decisions. Indeed, including patients in their treatment plans is essential for effective teamwork and understanding a patient's specific needs (Mitchell et al. 2012; Casimiro et al. 2015). Team members can choose the most appropriate teamwork pattern based on the patient's condition, the complexity of the care required, and the patient's cognitive status (Mitchell et al. 2012). Thus, limiting the patients' autonomy in medical decisions can hinder effective teamwork and optimal healthcare outcomes.

7.5 Summary of the Chapter

After analysing the data, some factors influencing team dynamics in the ED were found, including environmental, organisational, and interpersonal aspects of patients and their families. The theme of environmental factors showed that emergency care was unique and unpredictable. The participants' experiences indicated that their work environment differs from other health departments. For example, Francisco viewed the ED's unpredictability as an opportunity for creativity and avoiding routine, while James highlighted the challenges that unpredictable cases had burdened the team. This illustrated how the dynamic and chaotic environment of the ED can promote success and present challenges for the team. The physical layout was also identified as critical for effective teamwork in the ED. The nursing station facilitated rapid communication and enhanced service delivery by allowing staff to reach each other and resources easily.

Team interactions improved significantly in high-pressure scenarios such as crowding, emergency cases, and complex scenarios with multiple symptoms in the ED. During these situations, participants such as William and Adam indicated that a shared sense of purpose and urgency encourages teamwork, enabling them to work more effectively. In crowded or critical emergencies, decision-making and interdisciplinary teamwork were crucial. During these situations, the team members worked together more effectively to handle the immediate challenges, developed a stronger professional relationship, and shared skills and supported each other.

However, although Vision 2030 intends (see Chapter Two) to improve emergency care, several barriers occurred in the ED, such as lack of management support, patients' and families' behaviour, and staff shortages. Staff shortages remained a critical issue in the ED. For example, Philips revealed that a staff shortage hindered timely emergency care and increased stress on existing team members, leading to physical and emotional strain.

In addition, the participants' comments showed that management deficiencies negatively influenced the effectiveness of teamwork and overall service quality in the ED. Issues including nepotism, unapproachability, and unwillingness to address critical staffing issues were common in the ED. For example, Emily and Kai highlighted how favouritism and nepotism led to unfair treatment, where some staff received preferential treatment over others, lowering morale and fairness. Moreover, Isabella mentioned that the management imposed collective punishments, increasing employee dissatisfaction. These factors are

essential as they demonstrated how poor management practices undermined the effectiveness of teamwork and service quality in the ED.

This study highlighted key factors contributing to ED overcrowding, such as the frequent use of emergency services for non-urgent care, as they were quick and free to access. For instance, Emily described the daily visits of non-urgent patients as significantly reducing their ability to respond to emergencies effectively. This shows that Category V nonurgent cases were a severe misuse of resources. Patients with non-urgent issues occupied the team's time and services that could be allocated to urgent cases.

Furthermore, violence at the ED, as described by participants, negatively impacted team interactions, creating a tense work environment. Aggressive behaviour from patients, caused by factors such as alcoholism and mental illness, worsened this issue. Cultural factors, including family involvement in medical decisions, also increased conflicts, as reported by the participants. These concerns are crucial because they highlighted issues that overwhelmed the ED resources and impeded effective teamwork.

Finally, the findings of this chapter support the KSA's Vision 2030 aims to reduce waiting times in the ED by revealing barriers such as staff shortages, the high number of nonurgent patients, and organisational issues such as management deficiencies and their impact on teamwork. Although previous studies (see Chapter Four) underscored the value of the physical environment for fostering teamwork, they often lacked investigation of the roles patients and their families play and the impact of inadequate management support, including staff shortages and shift work. Several of these findings align with Reeves et al.'s (2010) factors, specifically the physical environment, management roles, and the impact of shift work on teamwork. The discussion chapter will use this framework as a lens to compare real-world examples with the theoretical background and international literature. The following third findings chapter discusses findings that focus on teamwork skills and how to achieve effective teamwork in the ED.

CHAPTER EIGHT: THEMES 8-10

8.1 Introduction

This chapter presents the last themes (Themes 8–10) that emerged in the analysed data. These themes describe all the skills and factors needed for effective teamwork in the ED. Skills refer to specific capabilities, knowledge, and expertise that healthcare professionals should possess and employ in their everyday practice to ensure the best outcomes and satisfaction for their patients in the ED.

Emergency care requires the effective participation of different professionals and specialists; thus, effective interdisciplinary teamwork is crucial in the ED. In this chapter, the participants emphasised the need to master several skills to strengthen their health services and boost collaborative interactions within the team.

8.2 Theme Eight: Effective Teamwork

All participants described their understandings and feelings regarding effective teamwork and how it should be operated in the ED. They explained the benefits of effective teamwork in the ED. Effective teamwork was perceived as vital to patient safety, and effective teamwork promotes the feeling of not being alone and decreases anxiety. Isabella acknowledged this:

> The advantages of being in an effective team are endless. Effective teamwork cuts down on medical errors and thus enhances patient safety. Also, knowing that you're not alone can help reduce anxiety and raise efficiency. We all want to ensure that our patients receive the highest quality of healthcare, which is only made possible through effective teamwork.

Several participants mentioned the impacts of effective teamwork. Hanan agreed that effective teamwork can result in quality in the ED: "The health service will be faster, safer, [and of higher] quality, and save the patient's life." Charlotte also noted that effective teamwork can help to increase the pace needed in the ED: "That will speed up services and improve the quality of care in the ED, which is needed in the department."

The participants' responses regarding factors contributing to effective teamwork were divided into seven sub-themes: experience and support, forming relationships, harmony and compatibility, fast-paced performance, multitasking, and stress management.

8.2.1 Sub-theme one: Experience and support

Team effectiveness depends on the experiences of working as a team. Enough experience was found to assist members in dealing with the ED patients and decision-making toward team members. This helped members to achieve tasks faster while providing emergency services. For example, Ben described the specifications of the team members and believed that experience was needed for effective teamwork:

> I can say that the team member must not be new to the profession. This team member needs time to understand other team members. I would say the experience must be there, at least if you want to make a good team in the ED.

Ben also illustrated how experience could positively impact healthcare delivery in the ED, experience accelerating ED procedures, while inexperienced staff may delay the decision-making of the team:

> This will positively impact the services because they have enough experience to know how to serve the patients and give orders. Also, the team can understand all the procedures and the system in the ED. The new staff always look back at how to deal with the procedures and the system. For example, if there is a new physician who does not understand the blue code when this code will end or the CPR. Medically, the period of CPR is 40 minutes, and then you stop for about one hour or 40 minutes, and then you announce the death. If a new physician comes, he/she may continue for more than 50 minutes, which is wrong.

Research supports Ben's observation, showing that experienced teams perform more efficiently. Lapierre et al. (2019) demonstrated that teams with higher experience levels had better interactions and produced significantly better patient outcomes in the ED. Consequently, having sufficient experience on the team can lead to more effective and efficient emergency services, ultimately improving patient care.

Participants also asserted that being supportive of colleagues at work was vital for inspiring teamwork and creating a healthy work environment. The participants explained the importance of helping and supporting colleagues at work, how support can be provided, and the key benefits of it. Emma illustrated that support needs to be in place in case there are barriers that team members may face while working, which prevent them from performing their tasks in the ED:

> When my colleague has a sense of responsibility and sees that I have failed in something, she/he helps me and fills the gap I have made. I mean that when I am late in providing services, she/he helps me not to be late in providing the services. For example, when a patient needs something that I am responsible for, and I am busy, my colleague receives my patient and takes care of this patient.

Immediacy in responding to team members' requests for help and doing so without question was highlighted as necessary for effective teamwork. Lucas, for example, described effective teamwork as:

> Sometimes, members cannot perform a certain job, such as we have a nurse who works in the dressing room; sometimes, if she needs help when she wants to change the dressing for patients, she comes immediately to us in the observation room and asks me for help. In this case, I did not ask her why she could not do that work; immediately, I went there and helped her, and this was teamwork. If any person asks for help in the ED, do not ask him why; just start to help them.

Whilst not asking the reasons for needing help was valued, to respond quickly, Max noted that an environment that allowed team members to ask questions and feel safe in doing so could assist in performance development: "An effective team is a team established on trust and support. Supportive environments give members the freedom to express themselves and ask more questions. Asking questions adds to the members' knowledge and enhances their performance."

Charlotte gave an example of being supportive, stating that if a team member could not inject the intravenous fluids, he or she left the work for another member to avoid harming the patient: "We have a way that the nurses use when we want to inject the intravenous fluids (IV) into the patient's vein. If you fail to inject it twice, leave the patient to the other nurses for one hour."

Shan emphasised the strong correlation between effective teamwork among healthcare professionals and patient outcomes. By supporting each other and collaborating, the healthcare team can deliver patient care with less stress. As a result, patients feel well-cared for and supported while receiving emergency care:

> There is a direct link between effective teamwork and patient care. When team members support one another, they begin feeling less stressed when providing patient

> care. This is positively reflected in patients. Patients assume that all members responsible for their care have strong teamwork skills. When team members begin functioning as one element, patients feel relieved and find it easier to overcome existing emotions such as mistrust and fear. Strong relationships between caregivers and patients increase patient satisfaction levels and may improve mortality rates.

The participants highlighted that team effectiveness in the ED relies on experience and mutual support. They confirmed that experienced team members work faster and make better decisions. This confirmation aligned with Lapierre et al. (2019), who also found that team effectiveness in the ED relates closely to the experience and support of team members. Thus, ensuring a supportive and experienced team in the ED can improve collaboration, decision-making, and patient outcomes.

8.2.2 Sub-theme two: Forming relationships

Forming relationships with colleagues was linked to the strength of ED teamwork. Several participants believed that strengthening personal relationships among team members is a way to create effective teamwork in the ED. For example, Adam recommended that tolerance and considering the team members as friends or family members could make the team effective:

> Goodwill towards the team members. For example, you look at your colleagues as friends or family, and even if they made mistakes with you, just forget about what happened and consider that they have issues or bad moods from the patients or other private issues.

Rain highlighted the negative impact of poor relationships, which contributed to weakening teamwork. He linked the team members' relationships to the team's strengths and the condition of the work environment. Rain believed that a poor team results in an ineffective ED environment, which made the pace of the services slow:

> For example, poor teamwork is when you find the members dislike each other and do not communicate with each other. This will make the environment slow and not active when the patients come. They will start to look for the team members and will wait for a long time to be served because of the slow mood of the department and the interaction of the team.

Mia provided an example illustrating that if the relationship between the members and the leaders was weak, this could affect a staff member's psychology and, ultimately, impact productivity negatively:

> Poor relations between members can negatively impact their performance. For example, if a team member has a poor relationship with the team leader, he/she will always be under stress. The quality of their relationship will negatively affect the member's psychological well-being. That means that the member will start to show less commitment to his/her duties, and the performance will decrease as a result.

The participants affirmed that developing strong relationships with colleagues helped create an environment where goodwill, tolerance, and empathy can enhance collaboration. According to researchers (Salas et al. 2015; James and Bennett 2022), relationships among team members are a key aspect of efficient teamwork. This underscores the crucial role of interpersonal relationships in shaping effective team dynamics.

8.2.3 Sub-theme three: Harmony and compatibility

Some participants highlighted the importance of harmony and compatibility, which they felt was integral to effective teamwork. Participants asserted that harmony and compatibility were significant elements that helped staff members find their interests and avoid barriers when interacting with other team members. However, Philips argued that harmony has been neglected in formulating many teams:

> When putting a team together, one must account for harmony. Harmony is the literal ability of an individual to coexist and work with another. Unfortunately, when building teams, organisations focus solely on bringing together people from different disciplines and tend to overlook their harmony. The lack of harmony ends up weakening the base of the team and all its other units. If there is good harmony in the workplace and good communication with each other [the workplace functions better]. For us, the most important thing is that the physicians and nurses should have harmony and understand each other in the ED.

Similarly, Francisco believed compatibility must not be neglected when developing an effective team. He provided an example indicating that when the interests of the individuals are apparent in the team, it can result in compatibility among the team members:

> Within a team, compatibility can be studied from two different perspectives: member-to-team and member-to-member. Member-to-team focuses on what a member wants concerning what the team has to offer. For example, let's say Mohammed wants to be in a team where all members share their expertise when it comes to medical decisions and treatment plans. As long as the team offers what Mohammed wants, there is member-to-team compatibility.

Regarding member-to-member compatibility, Francisco also indicated that relationships among members needed more attention to obtain compatibility. He said: "Member-to-member compatibility needs deeper examination. In this instance, each member is paired separately with every other member on the team and is supervised closely."

Francisco went on to provide an example of the importance of compatibility, arguing that ignoring the compatibility may jeopardise patient safety:

> Let's say that we have examined member-to-member compatibility and found out that Mohammed and Khaled do not work well together. A successful team leader will know when to pair this couple and when to avoid having them together. Mohammed and Khaled shouldn't be assigned to work together to provide care for a critically ill patient so as not to jeopardise any patient's safety. In conclusion, a weak team is a team that isn't compatible on all levels.

The responses of these participants are consistent with existing literature on teamwork. Researchers suggest that interpersonal harmony and compatibility contribute significantly to team cohesion and success in high-performance teams (Lee and Park 2020). The ED can develop stronger, more cohesive teams to produce high-quality emergency work by focusing on these factors.

8.2.4 Sub-theme four: Fast-paced performance

Some participants asserted that fast performance was fundamental while working in the ED. As Shan discussed, there was a specific time, which is four hours, in which a decision must be made regarding a patient's condition. He stated that the four-hour period was essential for them, and they endeavoured to prevent patients from waiting for four hours, which could be achieved by cooperation:

> It is your duty as a team leader to check all sections in the ED if you find a patient is waiting, for example, three hours because we have a period here that the patients are supposed to spend a maximum of four hours in the ED. During this time, the treatment plan should be identified, and the decision should be made about whether the patient should be admitted or discharged. This is an important skill.

Lucas also believed that fast performance was a necessary skill that needed to be gained by the team members, saying: "In the ED, speed is a fundamental factor in critical situations and is a skill that all members of the ED must learn this skill."

Furthermore, Rain believed that having young staff members who are physically fit with fast reflexes will help to provide immediate care for emergency cases:

> I would like to highlight the importance of having young professionals in the ED. As we all know, the ED is visited by patients who require immediate treatment. Consequently, healthcare givers must be physically fit and must have fast reflexes. If they do not possess these skills, they might as well be considered a risk factor to the patient's health.

James outlined that in the ED, every moment counts. Staff members must constantly respond quickly and decisively to save lives or avoid future issues. It is impossible to deal with a group of sick patients without jeopardising their health and safety if you do not move quickly enough:

> In the ED, every minute matters. We are always expected to act quickly and promptly to save lives or to prevent further complications. Without proper speed, it is impossible to deal with a pack of ill patients and not jeopardise their health and safety.

As Charlotte clarified, approximately 1,700 patients attend the ED each week, requiring team members to manage their time efficiently to avoid delay.

Ineffective time management means that the waiting room is overcrowded with patients who might be struggling with critical illnesses and injuries that need immediate attention. Around 700 people walk into the ED each weekday and almost 1,000 on weekends. That is considered a relatively high number of patients requiring urgent care. As an ED doctor, the last thing you would want to be seen doing is sprinting around, trying to keep up with the patients coming in. To avoid such an occurrence, healthcare providers must be trained on

how to manage time effectively. Time management is the skill that qualifies medical members to manage patients within a limited period.

William stated that in the ED, doctors are adept at quickly taking a patient's health history and reaching a diagnosis. This ability is an essential skill in the ED, which requires time management:

> Every doctor must bear in mind that the examination of each patient shouldn't exceed 10 minutes. Doctors must be prepared to ask patients questions necessary for their medical diagnosis and avoid any conversations that might hinder the speed of that process. The ED teams have special skills in which they take the health history of the patient and perform diagnosis in a faster way, and this is a required skill in the ED. Some patients tell the story of their lives, and many patients wait to be serviced. In these cases, you must have the skill to make the patient only give important information and try to make the patient stop talking in a respectful way to avoid his/her anger.

Francisco believed that the ED team members had cognitive abilities different from those working in other departments. He believed that the rapid assessment of ED cases is a crucial ability to save patient lives:

> I'm not trying to discriminate between medical specialities, but I believe those working in the ED possess different cognitive abilities than those working in other departments. Emergency medicine calls for a thoughtful strategy that incorporates risk classification, evaluation of urgency and the need for instant treatment. The medical staff in the ED are trained to process less data in little time and use it to assign a level of potential risk or urgency. Levels of perceived urgency differ from the viewpoint of emergency healthcare providers and providers from other specialities. This can interfere with patient care and generate negative outcomes.

Teamwork in the ED depends heavily on timely collaboration under high pressure (Weaver et al. 2017). Timely decisions and quick responses are crucial in this context since they can significantly impact patient outcomes. Thus, fast-paced performance skills are vital for assisting teams to coordinate effectively and manage time to ensure quick care delivery.

8.2.5 Sub-theme five: Multitasking

Multitasking teamwork was one of the major skill requirements that emerged from the participants' statements. Because the ED is an unpredictable environment, and team members have a set of tasks that need to be performed simultaneously, multitasking skills were required, according to Max. He said:

> I also believe that multitasking could be really useful in the ED. There is always a pile of tasks that need to be done daily, and multitasking can sometimes come in handy. If used properly, multitasking can save time while simultaneously increasing productivity. To be an efficient multi-tasker in the ED, you will need to have significant mental ability and patience. That's mainly because the ED is an unpredictable environment, and I have seen doctors who get handed three tasks requiring their immediate attention all at the same time.

Lana provided an example of the practice of multitasking skills. She revealed that many emergency cases require team members to provide services to every case simultaneously:

> For example, a doctor examining a patient might receive an urgent query from one of his co-workers and be put in contact simultaneously with the Red Crescent regarding the status of another patient. I do not encourage multitasking when lives are at stake, but it's a skill we often find ourselves drifting towards in medical settings. Sometimes, I find myself being the lead on five cases of patients with critical illnesses. It's in such situations that I use multitasking to distribute my team members in a way that doesn't jeopardise patient safety or the quality of the healthcare provided.

The participants noted that multitasking skills were often necessary, and although they could save time and increase efficiency, they also presented challenges. Thus, it is crucial to manage the situation without compromising patient safety. As outlined in Chapter Three (section 3.4), the unpredictable environment in the ED requires quick, timely actions to protect patients (Grover et al. 2017). Therefore, multitasking can help team members manage multiple tasks simultaneously, facilitating timely decision-making and fostering teamwork in the ED.

8.2.6 Sub-theme six: Stress management

The sixth skill that the participants revealed was stress management. Because there were life-threatening cases in the ED, team members may experience stress, which can potentially lead to burnout. Thus, managing stress was identified as necessary, as Nour mentioned:

> One of the most important skills is stress management. As we all know, the ED is a stressful environment, and there is a life at stake literally all the time. Healthcare workers, as a result, are at a high risk of burnout. Thus, they must have proper stress management practices and techniques to be able to cope and thrive with the constant pressure of their demanding job.

Lana stated that while the ED is a stressful environment, it relies heavily on the cooperation of the members to avoid health issues that may occur for the employees during work due to stress:

> As you know, the ED is a very stressful environment that relies solely on the efforts of its staff members. To ensure their members' physical and mental safety, hospitals started implementing what is known as interdisciplinary collaboration. This term literally translates to the practice of providing healthcare from a team-based viewpoint.

Kai revealed an example of the benefit of teamwork. When Kai was stressed, he forgot to do an essential procedure for the patient's health. Kai's colleague reminded him to perform this procedure:

> I once had a 12-hour shift, and near the end of my shift, I admitted a patient with a medical history of allergies. The patient's case was not critical and needed an intravenous injection. To be honest, I was too stressed and unfocused at that time. Fortunately, one of my co-workers pointed out the need to do a drug allergy test. I did the test, and it came out positive. This is how teamwork reduces errors and improves outcomes.

A high-pressure environment and high-risk cases made effective stress management necessary in the ED. The participants emphasised that this skill and interdisciplinary collaboration helped staff deal with stress and prevent health issues. Experiencing burnout can result from intense stress among the ED members (Khattak et al. 2013). Therefore, stress management skills and practices are crucial in the ED.

In this theme, the participants discussed the main factors for creating effective teamwork in the ED. The participants discussed the benefits of teamwork in providing quicker, safer services and improving the quality of care. In addition, they revealed that team effectiveness relied on mutual support and team members' experience, which improved decision-making and the quality of service. They also noted that strong relationships, managing stress, multitasking skills, and working in harmony enhanced teamwork and improved patient care. Participants also highlighted the importance of communication skills, which is discussed below.

8.3 Theme Nine: The Value of Communication

Communication played a critical part in ensuring effective teamwork in the ED. This theme discusses the different communication factors and their impact on ED teams. These factors were further categorised into seven sub-themes: communication as a critical skill, listening, friendly communication, non-verbal communication, language differences among team members, language differences between team members and patients, and communication channels.

8.3.1 Sub-theme one: Communication as a critical skill

All participants considered communication as a fundamental skill that significantly impacted team members and patients in the ED. According to Francisco, there was a directive from the Saudi MOH (Employee Performance Covenant) to evaluate the communication skills of employees:

> A few years ago, healthcare staff were evaluated based on their scientific knowledge, working hours, diagnostic abilities, etc. Recently, the Saudi Ministry of Health has implemented an evaluation model that evaluates healthcare staff largely based on their communication ability and teamwork with their co-workers and patients. The Saudi Ministry of Health has linked the annual bonus to this evaluation. They established standards that the teams' leaders evaluate their members.

Ben stated that effective communication generated positive results: "Communication is one of the vital signs of a high-performing culture. For communication to yield positive outcomes, it has to be effective."

I conducted an observation to explore the communication process among team members in the ED. During the observation, I noticed that the team members relied on a quick meeting in which they met in the hallway and discussed important information regarding their emergency cases. The quick meeting was about five minutes and helped the staff members express their opinions and decisions about the patients. See Observational Field Note 2:

Observational Field Note 2

There were two patients in the resuscitation room, and both were conscious. At this moment, two nurses and a physician were with these patients, and they were speaking while caring for these patients. After these staff provided the needed medications for those patients, they went outside the room to the staff station which was located in front of the resuscitation room. The physician asked for a quick meeting, and they gathered with another physician (male), a resident (male), and five nurses (females). They started to discuss the two patients' history and physical findings and the treatment plan for those patients. The quick meeting period was about five minutes, and they communicated with each other. The team leader was a physician who made the decisions, and the others were listening to him. The conversation was in English. They discussed, for example, the reasons for admitting the patient to the ED, which was an abdominal issue. The team leader ordered lab work from the nurses. At this point, the team members discussed their points and focused on the conversation. Together, they determined a care plan for the patient and discussed who would be responsible for each part of the plan. After providing the orders and the instructions for the team members, each one of the team members went to complete his or her tasks.

Lana believed that communication was an essential skill for the ED team members, which could help them to discuss the treatment process for the ED patients:

> The most important skill is effective communication among team members; when the team members are interconnected and communicate with each other, they can provide better health service for patients because there will be a discussion about the patient's status. Sometimes, if you are working in overcrowding, you see and examine the patient. When you communicate with your colleague, he/she will remind you about something such as that laboratory work must be done or something that needs to be done for this patient; this is the benefit of communication. When all the team

> members are communicating with each other, the patient will receive the best service, and if you lose communication, there will be a problem.

Yousef reported that wrong diagnoses, incorrect prescriptions and recommendations, less patient satisfaction, and higher mortality rates were the consequences of poor communication:

> Poor communication between healthcare providers can lead to lower productivity, poor healthcare levels, and increased casualties. Poor communication between healthcare providers and patients, on the other hand, can lead to wrong diagnoses, incorrect prescriptions and recommendations, less patient satisfaction, and higher mortality rates. Effective communication isn't just a supplemental quality but a necessary skill that can no longer be overlooked in healthcare settings.

Yousef also continued his feedback, saying that ineffective communication can lead to poor teamwork and described the consequences of inefficient teamwork. He believed that poor teamwork threatens patients' safety:

> There will be no good communication, and they are uncooperative. If this happens, patients will be lost, and you see overcrowding and will get confused about what you will do. Poor teamwork will put patients at high risk and patients' health will get worse. We do not want this to happen, and we consider the patient one of our family members. Because of that, we try to provide the needed services to the patients faster.

This sub-theme demonstrated that effective communication was essential for ensuring effective teamwork and high-quality patient care in the ED. As outlined in chapter two (section 3.3.2), the definition of teamwork in healthcare highlights that effective communication and shared decision-making are essential for achieving optimal patient and staff outcomes (Ream and Xyrichis 2008). This aligns with the participant's belief in communication as a fundamental aspect of teamwork in the ED. As a result, maintaining effective communication within teams is essential for enhancing team interactions and patient care outcomes in the ED.

8.3.2 Sub-theme two: Listening

According to the participants, listening was an important element that needed to be considered during the conversations in the ED. The environmental conditions of the ED

include staff stress and crowding, which may impact the quality of communication. Thus, without the ability to listen effectively, messages can be misunderstood, leading to errors in the health services provided in the ED. As Ben argued, effective communication is not solely about sending and receiving information; effective listening must be applied to have effective communication and avoid personal conflicts:

> As you know, the ED is a very stressful and unpredictable environment. This stress may cause team members to misinterpret each other, thus developing personal conflicts and misunderstandings. As a team leader, I constantly remind my members that effective communication is more about listening than talking. Active listening is also very different from the simple act of hearing. When you learn how to become an active listener, you will become able to notice the slightest intonations in someone's voice. Those intonations help you read a person's emotions and make you less likely to misinterpret what they say.

Nour highlighted how effective communication must be. She explained that listening, use of understandable language, and respect for the staff can create effective communication:

> The most important thing is that I listen to the staff, and I let them speak about what they think and how they feel. If you let them speak, that will help to get out their issues or concerns. Then, I start to talk and use a language that helps them understand, such as making my words understandable, and I show them respect by respecting their opinions. This is what I usually do.

Adam also linked listening with effective communication. Adam described and provided an example of how critical listening is in terms of avoiding medical errors and wasting time and resources:

> While communicating, we need to listen because listening is important because you receive orders from others, and those orders need to be understood correctly to avoid errors. I mean errors in diagnosis or medication will waste time and threaten the patient's health, and they can also cause a waste of resources. For example, if I haven't understood where to perform the x-ray, I mean which side of the body, I make extra work and images; thus, good listening helps us to work with quality.

Similarly, Rain highlighted the importance of listening in communication and explained that worrying about what to mention next during conversations is a distraction:

> An important element of communication is active listening. Active listening is being "fully present" in a conversation. I mean, when we are having a conversation, we are usually concerned about the things that we want to say next. These distractions cause misunderstandings and conflicts between team members or between team members and patients.

The participants provided in-depth information regarding the factors that improve communication in the ED and highlighted the significance of active listening. Active listening assisted the participants in reducing conflicts by identifying emotional cues and reducing misunderstandings. Ineffective listening can result in poor team interactions, medical errors, wasted resources, and miscommunication. This highlights the importance of effective listening during team meetings.

8.3.3 Sub-theme three: Friendly communication

This sub-theme evolved as I inquired about effective communication among team members. Participants believed that friendly communication developed relationships among team members and improved the working environment. For example, Kai believed that friendly communication could bring the members closer to each other. Kai also described how friendly communication can be practised:

> Friendly communication. It is not official, and it is like you are requesting orders. Friendly communication is when you talk with the members without limitations; you share almost any information with them. It makes a friendly environment in the workplace and brings the members closer to each other. Also, friendly communication is respect when talking with the members, and even the criticism is calm and respectful. To be honest, I have a colleague in the department with whom we always speak, laugh, and share good information. This person makes the work enjoyable, and I feel happy if I talk with this person.

Francisco described how to deliver effective communication: he believed that when providing information, it should not be in the form of commands:

> Communication is the most important thing that the team needs. I mean effective communication skills and not normal communication. Effective communication means communicating with your colleague and being certain that you delivered the information in a beautiful spirit, not in the form of commands.

Shan illustrated that effective communication results in clear responsibilities. Also, he believed that friendly communication helps to create a sense of belonging:

> Cooperation is brought about by communication. Effective communication between members makes their responsibilities towards the group clearer. Also, friendly communication helps individuals develop a sense of belonging. If a team lacks cooperation and communication, they might as well have lost their purpose, and the outcomes will surely be negative.

The participants believed that friendly communication could enhance team interaction and the work environment in the ED. They described it as informal, respectful interaction that promotes cooperation and creates a sense of belonging, thus enhancing teamwork and outcomes.

8.3.4 Sub-theme four: Nonverbal communication

The participants reported that practising body language while wearing a medical mask and when there was crowding supports the ED team in delivering information faster and acting quicker, which can expedite emergency services. In addition, different languages were spoken in the ED, which created a challenge in delivering some information; the participants utilised body language to facilitate the conversation. Nour provided an example, stating that she sometimes used body language with staff from overseas:

> Sometimes, when you talk with team members who speak different languages, such as Filipino nurses or Indian nurses, we use body language to understand each other. For example, if we need a pen, we use our hands to describe that, or if we forget the names of things, we use our hands to describe that.

Emily also indicated that team members experienced problems with accents and dialects, which forced them to rely on body language. She noted: “We have issues with the accents; sometimes, we need to repeat the words and use body language when communicating.”

In addition, Ben provided insight into body language practices in the ED, explaining that team members must act faster during a crisis to deliver the necessary care to the patients. Therefore, body language becomes a means to help the staff to speed up communication:

> In cases of crisis, nonverbal communication becomes the standard form of communication between team members. Let’s say a bus has rolled over, and a great

> number of patients were admitted all at once. Communicating verbally in such conditions will be ineffective because the ED is overcrowded, and shouting orders makes the experience more stressful for everyone. Therefore, body language or facial expressions help speed up the communication. For example, you can understand the facial expressions of the physicians. If they look frustrated or need help here, you can make a faster decision and help. Also, if the doctor has pointed to you a specific corner with his or her hand, you understand that quickly and help the physicians and patients.

Ben noted that wearing a medical mask could have an impact on verbal communication, resulting in the need to utilise body language to deliver information:

> Sometimes, if the physician is wearing a mask and there is overcrowding, you cannot hear everything from the physician, so you need to use body language. For example, if you have more cases in the ED and you hear a lot of orders among the beds, and when there is a group accident, you will hear more sounds, such as the devices and the physicians and the nurses, and you have to focus with the physicians by using your ears and your eyes. It is a simple barrier, and I do not think this barrier exceeds more than 5% if we talk about the percentage.

Ben believed that team members need to work together for an extended period, ideally more than a year, to develop the ability to read and interpret each other's body language correctly. He believed that when team members spend a significant amount of time together and maintain close relationships, they become more attentive to each other's nonverbal cues, such as facial expressions:

To understand the body language or facial expressions, you need to have a good experience with the team and have a close relationship with them. If you have team members who do not change and stay with each other in the ED for months or years, they can understand each other, which I expect will take more than a year.

Participants also reported that handwritten communication was used to deliver orders in the ED. As Ben stated, physicians used written communication to deliver information to the other staff: “They use paper to communicate with each other. The physician writes the order on paper and gives it to the nurse. Then the nurse takes it to the radiologists or the lab technicians.”

Adam illustrated that sometimes, when doctors were working fast, the quality of the handwriting is adversely affected, making it difficult to understand:

> Sometimes, we face difficulties in communication with physicians, and these difficulties can result in medical errors. For example, when ED physicians make written requests, we sometimes face difficulties reading the handwriting. ED physicians are always in a rush and that impacts the quality of the handwriting. In this case, I have an unclear request from the ED physician to serve the patient.

Adam also described the negative impact of unclear handwriting on the services. He said: "This, of course, will cause unnecessary delays in the services. I will go back to the physician and ask for clarification. Sometimes the patient is right about where the x-ray must be done, and the physician is wrong."

This sub-theme underscored the value of nonverbal communication in the ED, especially when verbal communication was difficult during overcrowding, language barriers, or wearing masks. The participants revealed that body language, such as gestures and facial expressions, helped to convey information faster and facilitated team coordination in urgent scenarios. While handwritten communication was also used for orders, participants reported that poor handwriting caused delays and misunderstandings, which negatively affected the speed of teamwork and the emergency care

8.3.5 Sub-theme five: Language differences among team members

The KSA healthcare sector relies heavily on international professionals, as discussed in Chapter 2. While these international workers are critical in holding various healthcare positions, the current study revealed that they often faced significant challenges concerning communication. This study found that international staff were insufficiently familiar with the linguistic and cultural context of the Saudi ED environment, and language barriers considerably impacted effective communication among team members.

The language barrier was notable in the ED because four different languages were spoken: Arabic, English, Filipino, and Urdu. The team members considered English the common language because non-Arabic members encountered difficulty speaking Arabic. At the same time, Arabic staff members also had English language barriers. These barriers were the source of poor communication and impacted collaboration. As Ben expressed: "It is nearly impossible to reach a common understanding with someone who doesn't speak your

language." He continued: "I would say that, to be honest, not everyone is fluent in English, so there must be question marks in the English conversations."

Philips explained that non-Arabic staff faced difficulties when speaking with Arabic staff, and Arabic staff members had barriers when speaking English: "Some Saudi staff can speak English, but not that fluently. For example, if I talk to them about the patients or their work, they reply in Arabic, so sometimes I can't understand them. They cannot explain further in English."

Observational Field Note 6 supported Philips' statement. I listened to a quick conversation between a Saudi and a Filipino nurse during the observation. In this conversation, the Saudi nurse asked a question in the wrong way:

Observational Field Note 6
A Saudi nurse approached a Filipino nurse and said, 'Where is the busy?' The Filipino nurse told her to repeat the question. When she repeated the question, the Filipino nurse understood her and said: "Yes, we were so busy. We had too many patients." The Saudi nurse was asking about the crowd and intended to say: "Where is the crowd?"

On the other hand, the non-Arabic nationalities team members were not fluent in Arabic because they knew few Arabic words. For example, I observed that:

Observational Field Note 6
I have listened to non-Arabic members when they speak Arabic, and they used very simple words such as 'What is your name?' and 'There is nothing.' These were the only Arabic words heard from non-Arabic staff members.

Nour described how, occasionally, she faced difficulty understanding the overseas nurses:

> Sometimes, when I talk to a foreign nurse, I do not understand everything she says, or sometimes, I find it difficult if I want to talk about something. At that moment, I call an Arabic physician who understands English for translation.

Ben also shared an example of the barrier between different languages. Ben admitted that he had some challenges in understanding the medical terminology:

> My colleagues and I faced some challenges. For example, when the physicians talk about a medical term that you do not know so at this moment, you start to look at the staff around you to ask for a translation. I remember the first time when I joined my job. The physician told me to please give the blade; I had another understanding of this term at that time. I thought blade meant a form or a paper and the staff around me were laughing because this is a simple thing, and I had no idea about it. You know that medical terminology differs from other daily terms we use.

Olivia asserted that working with diverse team members is not easy when communicating with each other. Olivia stated that although everyone in her team could speak English, they still had differences in accents, which could cause communication gaps:

> There are some language barriers within the team that I am well aware of. Being part of a diverse team is not easy when it comes to communicating. Everyone on my team, including me, speaks English as a second language, which can sometimes lead to misunderstandings. Another problem I assume falls under language barriers is the different accents. That means that people will be technically speaking the same language, but their accents and differences can lead to gaps in communication. For example, as an Indian, I notice that my nuances are different from those of my fellow Filipino or Saudi co-workers.

Smith expressed his experiences regarding the difficulties that he faced when attempting to understand the different accents in the ED:

> When I first started working here, I found it very difficult to overcome language barriers. I am a French speaker, and all the employees speak English. It is not that I do not understand English completely, but non-native speakers spoke it, so it was hard to interpret. For example, the nurse that I used to work with was Indian. Obviously, English was not her first language, and this caused miscommunications.

Philips provided an example of how language barriers negatively impacted the team members' interaction and mood. He said: “If I have been not understood, the other staff will get angry.”

In contrast, some participants had different opinions about the language barriers among the team members, and they did not consider the different languages as an issue since they used a common language, English. For instance, Francisco stated that the English language was a facilitator among the staff members:

> I do not see different languages as a big barrier because we use English most of the time; we can deliver the needed information. The English language is the solution. Most of the staff do not have issues with the English language.

James also highlighted that there were no issues with the languages since the staff had studied in English:

> Communication in Arabic or English is fine, no problems. The main language that we use is English. This is easy for us to use, and we use the medical language. The staff here were studying in the English language. It is clear, and we do not face any challenges.

Smith outlined that doctors utilised simple language to facilitate communication and solve language barriers. He said: “Because the majority of nurses are non-Arabs. Doctors use simple language to ensure that their communication is smooth and effective.”

The participants acknowledged that language differences between team members hindered effective communication, especially among multicultural teams. Although four different languages were spoken, English was the common language, even though not everyone was fluent, which caused confusion. Accents and medical terminology also contributed to communication difficulties. Therefore, addressing language barriers is crucial to facilitating team communication and patient outcomes in the ED.

8.3.6 Sub-theme six: Language differences between team members and patients

The participants' responses clearly indicated that international staff members were perceived as translators who could effectively communicate with patients of the same nationalities or those who spoke languages they understood. On the other hand, Arabic patients could not understand the international staff members' English. For instance, Ben mentioned that patients often struggled to communicate in English with the staff. He also stated that he could not translate for patients:

> One time, an Arabic patient came to the ED, and he was suffering from the urinary catheter and the patient could not explain to the foreign nurse about his issue due to the language difference. At this moment, the patient will need you as a manager and an Arabic speaker to translate for the foreign nurse, and this will be difficult for me to translate because I do not have the appropriate vocabulary, which is not my native language. Also, if the patient said I have burning sensations in my throat, this will be difficult to translate; I will need more sentences and body language to describe it to foreigners.

Philips explained that non-Arabic staff needed to speak Arabic fluently to deal with patients: "We face issues communicating with the patients; we cannot understand them. We consider this as a language barrier. Foreign staff speak a little Arabic, and the patients do not understand English, so this is a conflict."

Kai confirmed that sometimes the foreign staff could not understand Arabic patients, making the patients dissatisfied:

> Sometimes, foreign members who work in the ED do not understand Arabic patients. Foreign team members do not understand Arabic slang and are almost non-existent. They know a few words of Arabic slang. Sometimes, this makes the patients uncomfortable because foreign members do not understand them.

Smith shared an example about a Saudi patient who did not understand English and how this matter impacted that patient's mood:

> A few weeks ago, we admitted a 70-year-old into the ED and our neurologist was assigned to see him. The old man was a Saudi who didn't know English, and the neurologist was a Nigerian who didn't know Arabic. The patient was very calm at the beginning, but his inability to communicate frustrated him. He started yelling and getting mad, so I had to get involved to help save the situation. I acted as a connection between the patient and the neurologist to ensure that they were able to communicate and share concerns effectively.

Other participants noted that having different languages spoken in the ED was helpful to both patients and team members. Non-Arabic patients may cause language barriers, creating miscommunication with Arabic staff. Thus, international staff members can assist in bridging communication gaps when interacting with patients who speak similar languages, improving

care in the ED. For example, Kia noted that when admitting an Indian patient who did not speak Arabic or English, there were Urdu-speaking nurses who could translate and ease the communication for this patient:

> Besides, my team members are of diverse backgrounds, and this proves to be beneficial all the time. For example, when admitting an Indian patient who doesn't speak Arabic or English, communication is made possible through our Urdu-speaking nurses. The nurse interprets what the patient is trying to say to his/her fellow nurse or even the doctor. Working within a team makes facing inconveniences achievable.

Commensurate with this, I observed a Saudi nurse faced difficulties understanding a patient who spoke the Urdu language, but they were able to call on an Indian colleague for translation:

Observational Field Note 2
In the ED, I observed that there was a multicultural team; this helped when providing health services to foreign patients. One patient was admitted to the ED, and he spoke only Urdu, but he was with a Saudi nurse who could not understand the Urdu language. In this case, she called her colleague to come and translate for the patients. Immediately, an Indian nurse came and started translating Urdu into English, making the Saudi nurse understand the patient's concerns.

Francisco mentioned that it was just by chance or luck that they had physicians who could speak more than one language: "Fortunately, we have physicians who can speak more than language. We have a Nigerian physician who can speak four languages."

Regarding the consequences of the language barrier between the staff and patients, Max noted that the quality of the healthcare provided could decrease because of miscommunication:

> Language barriers between the medical staff and the patients are of fatal consequences. Miscommunication between healthcare professionals and patients can lead to a wrong diagnosis and a faulty medical prescription. This decreases the quality of the healthcare delivered and jeopardises patient safety.

In this sub-theme, the participants reported that international staff often served as translators, assisting patients who spoke the same language. Arabic-speaking patients, on the other hand, struggled to communicate with non-Arabic staff, resulting in misunderstandings and frustration. A few participants noted that having a multicultural team helped to solve language issues, especially when staff translated for non-Arabic patients. Nevertheless, language barriers still pose risks to emergency care, and miscommunication can slow the flow of team interactions in the ED.

8.3.7 Sub-theme seven: Communication channels

In this sub-theme, the participants clarified the communication channels team members used to deliver information in the ED. The participants reported six communication channels: intercom, telephone, tube system, a whiteboard, Red Crescent software programme, and WhatsApp. For example, in the ED, the team members used an intercom system, which allowed a person speaking into a microphone to be heard on a speaker by other staff members in different rooms or areas within the hospital. Philips said:

> We usually use an intercom, which is a voice communication system, to communicate with each other and with laboratory staff, radiologists, and the reception staff. Also, we use it to announce that we have emergency cases to call physicians or anyone to help us.

Adam stated that sometimes the team members used a telephone to communicate with each other, but the telephone could not be heard everywhere in the hospital. Therefore, the ED team used the intercom, which could be heard everywhere in the hospital:

> Sometimes, we communicate with the ED team by telephone, but sometimes, you are not close to the telephone; you may go to the toilet or be busy with patients, so you cannot answer the phone. In this case, the ED team used the intercom to call us and mention what they needed. This is a great way to communicate and help us to know what they need and deliver the needed services.

As I noticed during the observation, the intercom was a quick access solution to locate the team members, helping to save them effort and time when looking for their colleagues. In addition, the intercom system helped the team members prepare for incoming emergency cases; it helped them to announce the case and gather faster:

Observational Field Note 1

The team members used an intercom located in the nursing station. Nurses always used this speaker to call doctors, other nurses, and the laboratory and radiology departments. The speaker system was routed to the reception, triage, consultants, staff rooms, corridors, examination rooms, and the entire building. This enabled all manner of medical personnel to be just a call away when on duty. This helped them gather quickly, and sometimes, they go to the toilets or a doctor's room, where they sit and eat or talk. Therefore, this speaker helps them to communicate quickly. For example, one patient approached a nurse and asked her where he could find his doctor. Immediately, she went to the intercom and called the patient's doctor. In addition, when I was sitting in the ED, I heard a nurse use the intercom to announce that an emergency case had arrived at the ED. In less than one minute, two physicians showed up and started to check the case in the resuscitation room.

Furthermore, Philips added a third method of communication, which was the tube system linking the ED with the laboratory department. The tube system allowed the staff members not to leave the ED while working to deliver samples to the laboratory department:

> We have a tube system to transport patients' samples. Before the tube system, the staff walked to the laboratory department to deliver the samples. It is difficult to leave the ED and deliver the samples because you may have patients that can't be left.

Also, in the ED, the team used a board to help them recognise who they were working with today and where they were working, facilitating communication and reaching the staff faster:

> We have a whiteboard where the charge nurse sometimes writes the distribution of the staff in the ED. So, when you come to work and read what is written on the board where you must work today. For example, today, you work in the triage; tomorrow, I will find that I have been assigned to work in the observation room. The board helps us to know who is working today and who is responsible for, for example, the resuscitation area, so we can call him/her if we need that person.

Shan added that the team members utilised a Red Crescent software programme in the ED. This programme was found to be beneficial and informed the staff ahead of time about the emergency cases that will attend the ED; this gave the team members enough time to prepare for the critical cases before they arrived:

> In a crisis, we have a Red Crescent software programme that's on the computer screen. For example, we receive a message from the Red Crescent, such as a case from the ambulance to the emergency department. This programme gives us a warning, and then we start to look at the details, such as vital signs and the type of situation. This programme is open 24 hours, and the warning sounds like the ambulance sounds. You go to see the programme when there is a warning, and you will find the patient's details, vital signs, and the type of situation. Based on this information, you start to prepare your team and tell them that we have a case. You start to tell them the patient's details.

According to William, the sixth communication channel used by the ED team was WhatsApp Messenger. WhatsApp was also found to be an advantageous application for the team members, which enhanced their relationships and developed their performance in the ED:

> … we have a WhatsApp group for the ED team that helps us to speed up the process. Also, this app helps us to have a positive relationship with team members. Also, we ask questions, and we quickly receive answers from the staff. We always receive new updates and shift changes, or if I need support, such as someone to work with us, I send that to this group. Sometimes, we exchange useful information regarding the work in the ED. For example, we share useful videos demonstrating the quality of care in the ED, which every member can watch and learn new things from.

This theme revealed the staff's experiences with communication across the ED. Communication in the ED was found to be a skill of paramount importance that needed to be mastered by the team members. The participants offered some suggestions for improving communication in the ED. For instance, active listening, friendly communication, and body language were significant elements in creating effective communication in the ED. Over and above that, the different languages spoken in the ED created challenges for staff members and patients in understanding the care process. Further, the participants discussed how the communication channels were crucial in improving communication and staff performance. Participants also highlighted the importance of team leadership skills, as discussed below.

8.4 Theme Ten: Leadership within Team

Leadership was identified as a key component of teamwork in the ED. Leaders have a massive impact on the barriers and facilitators in the ED. According to the participants,

leaders provided guidance, instruction, and direction to the team members in the ED to avoid conflict and provide the necessary care. From the data, three sub-themes concerning leadership emerged: team hierarchy, the leader's responsibility towards the team members, and the qualities of a good leader.

8.4.1 Sub-theme one: Team hierarchy

The first emerging subtheme shows how the team worked as a hierarchy in the ED. The organisational chart found in the ED (2020) (see Figure 4 in Chapter 6) illustrates this hierarchical and interdisciplinary structure. The Emergency and Ambulance Services Chairperson is at the top of the hierarchy, followed by the Deputy Chairman, then specific roles such as Quality Coordinator, Morbidity and Mortality Supervisor, and Rota/Leaves Coordinator. This structured chain of command is crucial in the high-pressure environment of the ED (Ajeigbe et al. 2013). In KSA, nurses traditionally follow doctors' orders, and management dominated by senior medical staff and administrative workers (Alyami 2021). The findings of this study demonstrated how these social hierarchies and the integration of senior and junior team members facilitated effective interdisciplinary teamwork in the ED. These interactions are essential in KSA, where hierarchy and authority are highly respected (Alyami 2021). Combining experienced professionals and junior staff in the ED created a supportive culture, which encouraged the exchange of experiences and skills and ultimately improved the effectiveness of interdisciplinary teamwork. In the ED, Kia reported how the hierarchy was structured:

> Doctors always give orders to the nurses, such as the treatment plans, and we follow them. Also, we have a nursing supervisor who organises coordination in the department. For example, the nursing supervisor always informs us in the ED about who will work in the observations and the trauma sections. Also, the nursing supervisor always looks for shortages and tries to be certain that the number of nurses is enough for the existing patients.

Emily revealed positive perceptions of the team hierarchy in the ED, stating that the friendly atmosphere and challenging cases promoted unity and mutual support, eliminating barriers and strengthening relationships:

> In the other departments, you will find the teams have routine work and a hierarchical structure which distinguishes between the consultant and the specialist. When you

> visit the ED, you do not know who the consultant and the specialist are working together, and there is no distinguishing between them, and you find them working as one person. Sometimes, in the ED, you perform your colleague's work, while in the other departments, you cannot do that. The friendly atmosphere in the ED attracts people to work in the department. I like to work in the ED because I can join and know the team members in five minutes, while if I go to other departments, I will need six months just to know the team members. The natural environment of the ED and the nature of the patients make more harmony than in any other department.

Francisco compared the ED team to soldiers. He asserted that the interactions among the team members were easier and without restrictions, while teams in other health units have structure and official dealings among team members. The informal structure of this team fostered fast decision-making and mutual support, unlike other healthcare units that are controlled by formal structures and official dealings:

> I would like the ED team [to resemble] the soldiers who work in the first line of the battles. You will find the officer and the soldier dealing with each other, and the leader motivates the soldiers without restrictions. Unlike when they deal with each other in the offices and do routine work, you will find a hierarchical structure and official dealings.

Smith confirmed that he did not view himself as only a leader. He worked side by side with the team members:

> As a team leader, I do not see myself as superior to any of my members, which is reflected in our teamwork and performance. I not only coordinate the workflow but also work side by side with my members to get the job done as fast and accurately as possible. It is true that I give out directions and implement strategies, but I follow them, too. The ED is like the heart of every hospital. If it fails, all the other organs (departments) will fail.

Shan reported that the positive hierarchy in the ED helped to gain experience, and it could provide valuable opportunities for career advancement:

> I can say that when I have arrived in the ED, or any physician who works in the ED can advance their career. I was promoted from a team member to a team leader. In the ED, you deal with different patients' different illnesses or injuries, so you gain

> experience with health issues and how to deal with them. It's not like other clinics where you deal with specific cases. Also, you will gain these experiences faster and be eligible to be, for example, a leader or a supervisor in a few years.

Max noted that the senior member was expected to provide the junior member with useful knowledge:

> Where I work, we have senior members and junior members. The senior member is usually more experienced than the junior. We assign these titles to our members to develop their sense of responsibility. The senior member is expected to provide the junior member with instructions and valuable knowledge to enhance his/her performance.

However, during the observation, I noticed a varied and positive social hierarchy among team members. I found that there were no barriers or challenges in the interaction between the leaders and the team members; they worked as one:

Observational Field Note 2
I observed a positive hierarchy in the ED, where team leaders, supervisors, and staff work seamlessly together, making it easier to distinguish their roles. They communicated with each other in a friendly manner and with respect. The entire team collaborates actively in the field, including seniors, leaders, and supervisors. The team leader regularly engaged with team members, sharing laughs and maintaining a strong relationship. In addition, the shift leader approached team members with a listening ear, establishing an atmosphere where they do not feel pressured to be very serious. There was a friendly atmosphere among team members, as evidenced by smiley faces between leaders and members. Dealing with each other was fast, without hesitation, and appointments.

Smith argued that clearly defined roles within a hierarchy are crucial for productive teamwork. In the ED, a structured hierarchy ensured that everyone understood their responsibilities, thereby preventing confusion:

> Defined roles and responsibilities should be clearly assigned to different team members. When the people working together do not clearly understand their roles, they are likelier to feel like they do not belong in the team. If they are unsure about

> the roles they play, then they will have doubts about where to focus their efforts and thus will be less productive.

It appears that teams worked in hierarchical structures with clearly defined interdisciplinary roles in the ED. Belbin's team roles theory (1981) (discussed in Chapter Three) suggests that effective teamwork requires a clear balance among different roles. The hierarchical and interdisciplinary structure found in the ED is consistent with Belbin's concept. The ED chart is organised according to roles that each support a specific aspect of team functioning, enabling an effective and balanced team. The participants' responses revealed how clear and balanced roles within the ED contributed to a collaborative and supportive work environment, which improved job satisfaction, reduced burnout, and prevented confusion. Based on Belbin's theory and the participants' responses, clearly defined roles are essential for achieving successful interdisciplinary teamwork.

8.4.2 Sub-theme two: Leader's responsibility toward team members

According to the ED book (2020), each shift had a leader who was responsible and controlled both team members and the services. The shift leader managed all the activities of the patients as well as any conflict that may occur in the ED:

> The most senior position in the shift would be the team leader of the shift. All cases should be discussed with him/her, and any conflict during the shift transfer codes, etc., should be handled by him/her. It is the team leader's responsibility to make the shift function properly with respect to staff attended, referral case conflicts and waiting time in triage solutions. And no discharge is allowed without discussing and having the signature of the team leader (The ED book, 2020, p. 7).

The participants outlined some of the leaders' responsibilities in the ED. For instance, Shan stated that leaders were the ones who controlled and were responsible for the happiness of the team:

> Leadership is the ability to manage the team to achieve the goals. Leaders control the staff, and a successful leader knows the mood of the team members, whether they are happy or not and starts to try to make them happy.

The leader identifies who provides the medication for the patients, helping to avoid overdose if other staff provided the information. James said:

> Leadership because she/he can lead the department. If there is no leader, we will have unorganised work, and everyone will work independently. Also, without the leader, patients' lives could be harmed because the leader informs the members what to do. For example, the leader will direct us and select who will be responsible for the patients and who will provide the medications. Conflict will happen if there is no leader.

In addition, Rain believed that leaders are the key to team success for every organisation. They make an appropriate environment for staff to work with each other to achieve their common goals:

> At the core of every successful team is a dedicated team leader. Team leaders execute the enterprise's vision by ensuring the team's morale is always high. Leaders are responsible for cultivating a harmonious working environment that allows team members to work interdependently to fulfil shared goals. Briefly, a good team is a team that has an effective leader.

Rain added that doctors are familiar with the comprehensive medical procedures, which makes them qualified to lead the team:

> A team leader should be multi-skilled. That is why doctors make great candidates for a leader when referring to health care. This is because doctors usually have aptitudes or abilities in multiple health areas. For instance, most doctors are familiar with medicine, radiology, laboratory, etc.

William explained the role of the leaders and their impacts on patients' health in the ED. William stated that leaders guided the nurses and coordinated them during treatment to avoid conflict. He believed the members would work randomly without leaders, risking patients' lives:

> In the emergency department, if there is no leader, everyone will work by him/herself without coordination. For example, I am a team leader. When an emergency case arrives at the emergency, I make the decisions about what to provide to the case, such as medications and select one nurse to give the medications. If another nurse wants to give medications, I will stop her because if she gives [a medication] or gives a medication that another nurse requested, we will have a drug overdose, and the patient

> will be at high risk. Therefore, the leader will coordinate among them, and no one can do whatever they want to give.

As Lucas clarified, when team members received support from their leader and solve the issues they faced, this will improve their performance and promote teamwork:

> When the team members feel that you are a team leader, support and promote them, do not avoid or ignore the problem, and do not make the team member face the problem by himself/herself. Thus, if you support a team member, he/she will give and provide better performance and help you with the rest of the patients. This will also enhance confidence in his/her teamwork, and this will help us as a team.

Ben provided another example, illustrating that the team leader had overall responsibility for the performance of the staff within the ED. He said: "For example, if I found out that a certain employee is exhibiting poor job performance or is not staying on task, it is my duty to address this problem and impose disciplinary actions."

Olivia shared her experience working with a leader who mistreated the team members. When admitting emergency cases, this leader started yelling at the team members, which adversely impacted the morale of the members, caused stress and affected productivity. Olivia also asserted that this leader adopted a blame culture and imposed unreasonable punishments:

> A few years ago, we had a new leader assigned to our team. He was an experienced physician but treated everyone on the team poorly. Our team morale was affected, and we became less productive and more stressed. For example, if we admitted a critically ill patient, he would panic and start shouting at us harshly in front of our co-workers or the patient's family. Also, he would blame us for anything that might go wrong while providing treatment and impose punishments on situations out of control.

Max stated that it is normal for some team members to conflict with each other and believed that the leader must consider and develop relationships among team members. He said:

> Team leaders must have a general understanding of the relationships between members. For example, it is normal for some members to dislike others or be threatened by their performance. It is the leader's duty to try to build healthy relationships between the members.

Based on the participants, leadership within interdisciplinary teams in the ED was crucial. The findings indicated that the ED leaders were responsible for clinical expertise and teamwork practices, such as conflict resolution and guiding their teams. Similarly, Chapter 3 (section 3.6.3) also explains that ED leaders are responsible for clinical expertise, coordination, communication, and making decisions under pressure. They foster an environment where diverse healthcare professionals can collaborate effectively, navigating the complexities of patient care with a unified strategy and shared goals (Lateef 2018). As a result, leaders with both clinical and teamwork skills are essential for effective collaboration and decision-making in the ED.

8.4.3 Sub-theme three: The qualities of a good leader

The participants explained their experiences and perspectives regarding a good leader's qualities. Ben asserted that the quality of the leader was also based on knowing things such as the appropriate work schedule for the team members. Ben argued that an inappropriate work schedule could be a barrier in the ED since it impacted the mood of team members and service delivery. On the other hand, an appropriate work schedule could be a facilitator which can result in team members' satisfaction and improve patients' care:

> If the manager presses them for a certain number of hours, this will negatively impact them and the patient. When there is a good leader who knows how to create an appropriate schedule for the staff, the staff will be satisfied. Sometimes, the manager makes an inappropriate schedule they dislike; it is normal for them not to be satisfied during the work.

Emma believed that leaders must have a strong personality and be capable of managing staff and handling disruptive patients. A supportive leader creates an environment where employees feel confident reporting issues improving patient care:

> I would say that the leader must have a strong personality and be able to manage his/her staff; the staff members will be satisfied. This will help the staff not hesitate to complain or report any patient with a loud voice or inappropriate behaviour. They report or send this patient to the leader and the staff go back and dedicate themselves to the work and leave this matter to the supportive leader.

Ben believed that the success of the team and members' performance depended primarily on leaders who set goals for them to accomplish:

> I believe that a team, whether strong or weak, is a reflection of the leader. A leader must be able to set clear expectations and goals for the team. If the members cannot figure out if they are meeting objectives, they will eventually become unproductive and will begin delivering low-quality services.

In addition, Charlotte added that leaders must be able to divide responsibilities between team members based on their unique talents and skills. She said: “Leaders must be considered when distributing the workload. A smart leader is a leader who’s fully aware of his members' skills and assigns tasks within their capabilities.”

The participants’ responses on the qualities of a good leader are consistent with the team leadership concepts discussed in Chapter Three. A key finding was the importance of scheduling, part of team leadership concepts as it highlights leaders' roles in managing resources and clear communication (AHRQ 2013). Another critical point was the importance of goal setting, which ensured the need for clear expectations among team members. Team members are more likely to maintain focus and motivation when they know their goals (Carne et al. 2012).

Moreover, as the participants demonstrated, it was important to distribute responsibilities based on the capabilities and skills of the team members. Similarly, James and Stanley (2024) indicated that effective leaders must recognise their teams' strengths and limitations and construct, develop, and maintain effective teams. This alignment demonstrates how effective leadership within a team promotes team productivity and satisfaction by effectively assigning roles based on the members' abilities. Therefore, these qualities are essential for effective interdisciplinary teamwork in a chaotic environment such as the ED.

8.5 Summary of the Chapter

This chapter has provided insight into the skills and factors required for effective teamwork in the ED. The findings indicate that these skills and factors can be considered enablers when used effectively in teamwork. For example, Ben highlighted that having emergency work experience helped members solve complex tasks and make quick decisions. The participants also suggested more skills that must be mastered for effective teamwork in the ED, such as fast-paced performance and the necessity for multitasking skills and stress management. The findings also demonstrated the value of effective communication in the ED, which played a crucial role in interdisciplinary teamwork and patient care. The findings demonstrated an in-

depth understanding of how verbal, non-verbal, and written communication influenced teamwork in high-stress situations. For example, Ben illustrated that body language was used to quickly communicate messages during crises when verbal communication was impossible because of the chaotic circumstances. Emily also noted that team members experienced challenges with accents and dialects, which led them to depend on body language communication. These examples showed how non-verbal communication can increase communication and decision-making speed among team members.

However, as the KSA employs many international staff (discussed in Chapter Two), the findings showed major communication challenges among staff members and patients. For example, a Saudi nurse incorrectly said: "Where is the busy?" instead of "Where is the crowd?" to a Filipino nurse, showing the Arabic staff's difficulties when communicating in English. The international staff often used basic Arabic phrases that were insufficient for detailed communication. As noted in observation, they spoke only simple Arabic terms with patients, such as "What is your name?" The international staff also acknowledged that despite English being the primary language in the ED, no one was a native speaker, resulting in poor English communication. These examples demonstrate how language competence among team members can negatively influence effective teamwork and emergency care quality in the ED. This highlights the need for communication strategies that address the linguistic issues of the staff and ensure clear understanding among team members in the ED.

The findings also showed that team leadership in the ED was viewed not simply as a hierarchical position but as guiding, supporting, and leading the team. In the ED, the team leader ensured clear role definition, effective coordination, and clear communication within the team. For example, James explained how chaos can arise without effective team leadership, emphasising the importance of a leader in organising operations and preventing medical errors. Therefore, an effective team leader is crucial for team performance and patient care.

Finally, the findings support the KSA Vision 2030's aims to improve healthcare workers' training and the EDs services by showing the necessary skills and factors for effective interdisciplinary teamwork. While studies in the literature (see Chapter Four) focus on the value of hierarchy, team leadership, clear roles, and communication, as this study found, they often overlook barriers and facilitators such as multicultural communication, communication channels, and non-verbal interactions. These findings align with the factors highlighted in

Reeves et al.'s (2010) framework, especially the relational factors such as communication, team members' roles, hierarchy, and leadership within teams. In the ED, these factors could strengthen or weaken effective interdisciplinary teamwork. In the following chapter, the Discussion, these factors will be discussed and compared to Reeves et al.'s framework, as well as the international literature, focusing on their importance in the KSA context.

CHAPTER NINE: Discussion

9.1 Introduction

This chapter outlines how this case study has exemplified and expanded the current findings concerning teamwork theories (the conceptual framework of Reeves et al. 2010). This chapter begins by discussing an overview of the findings and then is structured according to this framework, which focuses on the factors impacting teamwork in healthcare. After analysing the themes and comparing them to existing evidence, this framework emerged as an ideal model for comparing and interpreting the findings. The findings demonstrated multiple factors affecting the interdisciplinary team, which can be applied to four domains of the framework: relational, processual, organisational, and contextual factors. However, individual factors, a fifth domain not part of the framework, also played a significant role in interdisciplinary teamwork. This chapter also provides an overview of the study's limitations and the chapter's conclusions.

9.2 Overview of the Findings

This study explored the practice of teamwork from the perspective and experiences of ED staff when interacting with each other in the admission areas of an ED of a public hospital in the Northern Borders region of KSA. The participants recognised that interdisciplinary teamwork was crucial to enhancing staff and patient satisfaction, improving patient safety, and reducing errors. These findings correspond with previous studies, such as Ajeigbe et al. (2013) and Weaver et al. (2017), underscoring the value of interdisciplinary teamwork concerning staff and patient satisfaction and patient safety in ED settings.

In addition, this case study has contributed valuable insights to the existing literature by exploring the advantages of interdisciplinary teamwork within the ED, as most participants asserted that working in a team was a key facilitator contributing to developing their knowledge and experiences while providing care in the ED. The participants discussed the importance of asking questions and seeking answers from their colleagues in improving their decision-making process. This approach enabled them to consider multiple perspectives and make better decisions that benefited the patient and the team. As Lake et al. (2015) attest, in situations where each individual's perspectives influence the outcome, all team members feel confident in the outcomes.

Moreover, since emergency care involved performing multiple tasks simultaneously, participants reported that the interdisciplinary teamwork approach allowed them to meet patients' needs sooner. This fact accords with the research of Grover et al. (2017), who explored ED nurses' perception in Australia and found that as a result of working as a team, tasks such as assessment, vital signs, documentation, analgesia and pathology can be accomplished three times faster. As found in this study, providing faster emergency services can reduce the length of stay in the ED.

Additionally, this study identified factors that significantly impacted teamwork in the ED. The following discussions explore these factors concerning Reeves et al.'s (2010) framework with the additional domain of "individual factors," which emerged from the data.

9.3 First Domain: Relational Factors

As discussed in Chapter Three, the relational factors within the framework of Reeves et al. (2010) focus on the dynamic interactions among team members. They include essential factors such as professional power, hierarchy, socialisation, team composition, team roles and team processes. Team processes encompass various aspects, including communication, team stability, team emotions, trust and respect, team building activities, conflict, and humour (Reeves et al. 2010). These factors influence the relationships and interactions within the team, contributing to the overall effectiveness and functioning of the team (Reeves et al. 2010).

Upon analysing the current study's findings regarding the practice of teamwork in the ED, it became evident that relational factors played a significant role in influencing the interactions and productivity of team members. In this case study, nine major factors emerged, aligning with the relational factors identified in the framework. Six of these, including team leadership, hierarchy, conflict, teamwork creates happiness, the value of communication, and nonverbal communication, are addressed within Reeves et al.'s (2010) framework. However, this study expanded on these relational factors and added in-depth real-life examples. This case study identified three other factors outside of the framework: disputes, harmony and compatibility, and the formation of relationships. These factors were considered relational as they directly influenced the team's dynamic interactions, including interpersonal relationships, communication, collaboration, and overall teamwork. Further, these factors highlighted the importance of how team members related to one another and how their

interactions influenced teamworking and effectiveness. Thus, team members can improve their relationships by understanding and addressing these factors.

9.3.1 Leadership within team

This study has revealed that in KSA, physicians are often perceived as the leaders in healthcare teams. In their framework, Reeves et al. (2010) underline the importance of medical power in controlling interprofessional teams. They indicated that in hierarchical structures, leadership is essential for ensuring open communication and team value. The current findings supported this view and added in-depth practical examples demonstrating how physician leadership was essential in the ED to achieve shared goals, address the team's needs, and satisfy patients' needs. This study found that the ED team, including physicians, nurses, allied health professionals, and administrators, must collaborate to provide quality emergency care.

This study found that in each work shift, a physician must lead the team and be ultimately responsible for the overall outcome of patient care. Based on the data analysis, it was evident that the team worked hierarchically while providing care in the ED. The participants clarified that a physician, as a leader, has aptitudes and abilities in various medical and health fields. According to the study's findings, team leadership was an essential team skill that directly affected the team's interactions and performance. These findings align with several studies. For instance, Gasparino et al. (2021) found that leadership is key to improving the work environment and, indirectly, to improving patient care, teamwork, and organisational performance. Similarly, Flowerdew et al. (2012) found that the ability to handle the demands of the ED requires a resilient team comprising strong leaders and communication skills.

The current findings align with Reeves et al.'s (2010) framework, particularly in how clear roles and leadership improve team interactions and performance. The present study found that team leaders provided direction and guidance to the team, delegated responsibilities, and involved members in decision-making. This improved patient care by avoiding confusion and facilitated decision-making. Similarly, Reeves et al. (2010) emphasised the need for leadership to define roles to prevent professional boundary issues. While Reeves et al. (2010) discuss the issues with unclear roles, such as confusion regarding responsibilities, the current findings expanded on this by adding in-depth examples of how this can be managed effectively. Based on the participant's experiences, a strong leader understands their team members' skills and assigns tasks based on their abilities. This understanding can help the

team to work more effectively, reduce misunderstandings, and enhance overall performance and emergency care.

Moreover, drawing on Belbin's theory (2012), understanding the role of a particular team allows one to develop strengths and manage weaknesses as a team member, thus contributing better to the team. Belbin's theory (2012) emphasises that team members should know their primary and secondary roles. This self-awareness enables individuals to identify their strengths, weaknesses, and preferred team-contribution strategies. Understanding one's role is vital because it allows team members to recognise how they can best be incorporated into the team's dynamics and contribute to the overall objectives (Belbin 2012). Thus, the team leader in the KSA ED team helped team members identify their roles while providing emergency care to patients. Further, participants felt most supported and confident within the team when there was a team leader; this helped them to perform better. Moreover, the participants revealed some qualities that ED leaders must possess. As the participants described, good ED leaders should possess decision-making skills, clearly state expectations and goals for the team, and fully understand the team members' abilities to assign tasks accordingly.

Keshmiri and Moradi (2020) discussed the qualities that effective ED leaders should possess, such as effective communication and feedback in motivating and guiding team members. In terms of similarities, both the current study and the study of Keshmiri and Moradi (2020) acknowledge the critical role of team leadership in promoting collaboration and achieving success in a team environment. They both suggest that effective leaders must possess certain qualities, such as effective communication skills and understanding and utilising team members' strengths. In emergency care, clinical decision-making is one of the most important professional capabilities that can significantly improve the efficacy and quality of care (Reay et al. 2020). This study indicated that the decision to have a leading physician at each work shift was a significant enabler as it helped the team members to be organised and coordinated as they received instructions from one experienced person, which helped to avoid conflict during the shift in the ED.

9.3.2 Hierarchy

This study found that the ED in KSA had a clear hierarchical and interdisciplinary structure that defined roles and responsibilities. Culturally, this aligned with the importance of following authority in the KSA (Alyami 2021). This cultural alignment allowed senior and junior staff to work more efficiently together and exchange experiences, as this study found.

This conclusion is consistent with Reeves et al.'s (2010) point on hierarchies, which revealed how structured hierarchies enhanced collaboration, supported junior staff, and encouraged collaboration in the ED.

Reeves et al. (2010) noted that hierarchies can positively and negatively affect teamwork. For instance, when students and junior staff are excluded and unable to make suggestions to senior members, this exclusion negatively affects collaboration (Reeves et al. 2010). On the other hand, Reeves et al. (2010) also indicated that hierarchies allow experienced staff to guide and support less experienced members, ultimately enhancing teamwork, as found in the current findings. This case study highlighted the positive aspects of hierarchies and added depth by showing how social hierarchies and experience influenced teamwork. For instance, the interaction between professional status and years of experience was evident between senior and junior staff members. Among the different work positions in the ED, there were no challenges or barriers between supervisors, leaders, and members, and they worked effectively together as a hierarchy. This resulted in staff satisfaction as well as the exchange of experiences among each other, which improved their productivity and decision-making.

Similarly, Scanlan et al.'s (2018) research, which was conducted in the UK, identified that job satisfaction and engagement of participants were influenced by support from senior staff and colleagues. Scanlan et al. (2018) found that, as a result of positive relationships with senior staff and colleagues, participants could cope with the challenging situations they faced while working in hospitals. Furthermore, Scanlan et al. (2018) found that feeling valued (being acknowledged for efforts and being respected) was significant. Conversely, participants who perceived poor support from the organisation and its representatives (supervisors and colleagues) were less likely to stay in the NHS (Scanlan et al. 2018).

However, the findings of the current study differ from the findings of Hai-Ping et al. (2020) in an ED in China; they found that the hierarchy between superiors and subordinates created a barrier to open communication and hindered efficient teamwork in the ED, which delayed the handling of emergencies because doctors ignored nurses' constructive feedback (Hai-Ping et al. 2020). The divergent findings between the current study and Hai-Ping et al.'s (2020) research indicate that there may not be a universal approach to teamwork and hierarchy applicable to all EDs. What works well in one ED may not necessarily work as well in another, as the dynamics and culture of each ED can be unique. Thus, ED leaders need to consider the specific circumstances of their department and tailor their approach to teamwork

and hierarchy, accordingly considering the various social hierarchies and potential barriers to interaction that may exist, such as the need to overcome obstacles to communication, such as the leader ignoring feedback from subordinates.

However, in this research, the participants likened the ED team to officers and soldiers on the front line of battles. They asserted that the interactions among the team members were easy and without restrictions. As mentioned by the study participants, teams in other health units maintain organisational structures and engage in official interactions with each other. It is evident from this comparison that there was a high level of urgency, intensity, and risks associated with their work, which demanded a seamless and highly efficient team dynamic. The analogy of officers and soldiers on the frontline underscored the urgency of their work, working under pressure, and the need for quick decision-making, collaboration, and coordinated efforts to provide timely and life-saving care. In addition, the unique nature of the ED requires a more flexible and responsive approach, minimising formalities to facilitate quick decision-making and action. This example adds to the framework by demonstrating how effective team leadership and well-managed hierarchies can significantly improve team performance.

Furthermore, the data from the observation and the interviews revealed positive insights into the team's hierarchy in the ED, as it helped make the ED environment largely friendly and smooth-running. A distinct characteristic of the ED team hierarchy was that communication did not have to go through a lengthy chain of command, which helped the staff to communicate efficiently. This facilitated the pace of the staff’s interactions and the delivery of the ED services.

The data also revealed that successful teamwork resulted in participants feeling connected with team members, being able to manage and execute patient care more effectively and connecting with each other to accomplish their mutual goals. In particular, the participants reported that the team worked effectively, and their interaction increased in three specific situations: during peak periods, emergency cases (resuscitation), and finally when there were complex cases with multiple needs. As the urgency and severity of the cases demanded a coordinated and cohesive response, the participants perceived these emergencies as motivators for effective interdisciplinary teamwork.

Grover et al. (2017) also found that teamwork in an ED in Australia was effective in particular contexts, namely resuscitation. Through simulation, the researchers identified that

several key factors contributed to or enhanced teamwork practices in this area, including a higher nurse-to-patient ratio, more nurses with postgraduate qualifications, and clearly defined roles for each team member. The current study and Grover et al.'s (2017) research indicated that the shared goal of saving lives often served as a unifying component, encouraging collaboration and interdependence among team members. The findings of these studies underscore the importance of shared goals and role clarity within EDs, particularly during high-pressure situations such as resuscitation. These studies demonstrate the importance of aligning individual efforts with a common goal and providing team members with the necessary structure to collaborate effectively. Similarly, Calder et al. (2017) and Boone et al. (2022) found that shared goals and clarity of roles can strengthen teams, especially in EDs, since team members understand that their contributions directly influence the team's performance in achieving shared aims. Consequently, they are more likely to collaborate and support one another (Calder et al. 2017; Boone et al. 2022).

Nevertheless, the differences between the findings of Grover et al. (2017) and the current study provide valuable insights into the diverse perceptions of effective teamwork in different emergency contexts. The current study provided a broader perspective, highlighting the need for effective team hierarchy and collaboration in emergencies and during peak periods and complex situations. These insights emphasise the need for appropriate approaches to fostering effective teamwork within emergency care in the ED. This way, emergency teams will be well-prepared to deliver effective care in the ED. Likewise, Gergerich et al. (2019) found that healthcare teams benefit from hierarchies, particularly if an effective leader can assign tasks and roles quickly during an emergency. The team hierarchy was vital to the participants in this study because it promoted the practice of teamwork by including a clear leader and ensuring that all team members commit to their roles in effective teamwork. Since the ED required high-speed delivery of services (Andriyani et al. 2019), the team hierarchy was a supportive strategy to contain emergency cases and provide the necessary care. As a result, the team members recognised their roles and responsibilities.

9.3.3 The value of communication

The findings of this study and Reeves et al.’s (2010) framework demonstrate that communication plays an essential role in interprofessional teamwork and patient care. Reeves et al. (2010) also identified that hierarchy and power struggles can hinder communication, negatively influencing team interactions and patient care. The current study builds on the

framework by identifying other communication challenges, such as language barriers, accents, and poor handwriting, significantly complicating teamwork. In the context of KSA, there were diverse linguistic backgrounds and cultural norms.

The current study's findings also showed that the MOH evaluated the performance of employees based on the quality of their communication, even though they did not receive training courses and faced language difficulties. This study found that non-Arabic-speaking staff could not communicate in Arabic. This language difficulty resulted in barriers between Arabic and non-Arabic ED employees. Zawawi and Al-Rashed (2020) reported that such obstacles are one of the challenges affecting foreign doctors in KSA.

Different communication barriers in the EDs have also been reported in the literature, such as poor listening, people speaking at the same, lack of interpersonal relationships (Lapierre et al. 2019), omissions and inconsistencies in medical records, deficiencies in triage and handover practices, and hierarchy in Hong Kong's EDs are reported to pose challenges for junior doctors and nurses who feel nervous about asking for clarification or confirmation from senior clinicians (Pun et al. 2015).

However, in the current study, although the English language was considered the common language among the Arabic and non-Arabic staff, some staff members complained about the quality of the accents, which generated ineffective communication. In addition, some Saudi staff members experienced difficulties in speaking English. The barriers to practising English effectively and using different languages among the team members led to staff of a similar nationality preferring to speak their native language during teamwork. Foronda et al. (2016) and Leonard et al. (2004) found that standardised communication can promote the smooth completion of a project and keep everyone safe. Additionally, their study found that language barriers and the preference for speaking native languages within subgroups can cause divisions within the team (Foronda et al. 2016). Based on this study, language barriers can reduce team cohesion and collaboration with diverse cultural and linguistic backgrounds. Further, it can hinder the exchange of knowledge and expertise, limiting the team's ability to acquire diverse perspectives.

In aviation settings, for example, many authors have emphasised how language barriers and cultural differences can cause communication breakdowns (Alderson 2009; Turney 2017). Consequently, staff may feel socially isolated and left behind, negatively affecting their collaboration and teamwork (Turney 2017). Moreover, although some international team

members knew a few Arabic words, it can be considered "broken Arabic," which was unsuitable for developing relationships and detailed discussions. According to Curtis et al. (2019), linguistic proficiency is essential to ensure safe communication in the context of a relationship, as concepts can differ from one culture to another. Since English was the second language of all staff members with different skill levels, misunderstandings were possible in the ED. According to the theory of intercultural communication, enhanced communication from the team promotes cultural sensitivity and mutually beneficial cooperation for a productive workplace (Brogan et al. 2015).

Alderson (2009) identified that cross-cultural communication is vital to preventing misinterpretations and misunderstandings that could adversely affect the collaboration between staff and patients. The findings from the literature and the current study demonstrate the need to consider differences in culture and language in cross-cultural communication to ensure the adequacy of understanding and interpretation of information and messages. Interventions are needed to improve language proficiency and promote shared language environments. Programmes tailored to the needs of the ED staff, including accent reduction techniques, could help to improve communication skills and overcome accent-related challenges. Also, efforts should be made to solve the language issues by employing interpreters or translation services. This would ensure accurate and precise communication between team members and patients who speak different languages, alleviating potential misunderstandings and enhancing the quality of care. In addition, shared language must become a key indicator for staff employment. By adopting these solutions, the ED in KSA can overcome language and cultural barriers, improve communication, and maintain a collaborative and cohesive team environment.

9.3.4 Nonverbal communication

This case study extended upon Reeves et al.'s (2010) framework by demonstrating real-life examples of nonverbal communication in practice. Although the framework emphasises the importance of nonverbal communication, this study showed how body language enhanced team interactions and helped them to respond quickly in the ED. These examples provided a deeper understanding of how nonverbal communication played a crucial role in managing fast-paced cases, especially in the KSA context, where nonverbal communication was more critical for teamwork due to the language barriers between Arabic and non-Arabic staff.

The participants found that using nonverbal communication when the environment was crowded and wearing a medical mask enabled the ED teams to deliver information faster and act quicker, thereby expediting emergency services. The participants provided insight into body language practice in the ED and how body language had become a tool that staff used to communicate more quickly, and that could save crucial time. There is a lack of literature on using body language to ensure effective collaboration among team members in EDs, and this study seems to be the first to highlight these findings.

To collaborate effectively, staff members need to understand how nonverbal communication and body language differ from culture to culture. They, therefore, need to be aware of and sensitive to cultural differences (Hultsjö and Hjelm 2005; Huang et al. 2009; Fatahi et al. 2010). Al-Turki (2019) also concluded that cultural knowledge is necessary for understanding nonverbal communication, such as body language, as certain clues may be offensive in different cultures. In addition, Härgestam (2015) and Härgestam et al. (2016) discovered that ambiguous non-verbal communication can cause misunderstandings and errors. Nonverbal expressions that lack clarity can lead to confusion and potential errors in situations where verbal communication is limited or nonverbal cues are unclear.

The present study demonstrated a significant dependence on nonverbal communication as a critical facilitator in rapidly delivering information to the ED team. The findings indicated that a better understanding of nonverbal communication might enhance interactions and contribute to promoting team interactions and meeting patients' needs more promptly. However, team members must be mindful of their nonverbal cues to ensure effective communication and minimise errors, particularly when verbal communication is limited. This mindfulness might be accomplished by adopting standardised gestures or expressions that are universally recognised or confirming the interpretation of nonverbal signals in critical situations.

In addition, handwritten communication was another example of nonverbal communication, which was not covered by Reeves et al.'s (2010) framework. Handwritten communication was identified as an important element of communication in the ED, helping nurses and allied healthcare professionals recognise physicians' patient decisions. Nevertheless, one participant explained that sometimes, when doctors were stressed, their handwriting could be challenging to read, requiring staff to return to the doctor for further clarification, which caused unnecessary delays in services. Varjoshani et al. (2015) reported similar findings in an

ED in Iran, with doctors' illegible handwriting leading to wasted time and increased stress. Handwritten communication could hinder team members from providing efficient care in the ED. This highlights the need for measures to ensure that doctors' handwriting is readable and easy to understand. For example, using electronic records to ensure clarity in the documentation process can reduce the chance of misunderstandings (Keshta and Odeh 2021).

9.3.5 Teamwork creates happiness

Reeves et al.'s (2010) factors and this study's findings highlight the importance of team emotions in teamwork. However, the current study added to the "Team Emotions" factor of Reeves et al. (2010) by expanding on the importance of emotional attachments within teams. While the framework suggests that emotional interactions promote team commitment and cohesion, this study showed how teamwork in the ED increased staff engagement, reduced stress, and enhanced happiness. The participants reported feeling more engaged and happier when working as a team. Assisting and exchanging information among team members was vital in facilitating a team's happiness. Research (de Waal 2018) has demonstrated that happiness at work positively impacts an organisation's performance, including increased productivity, lower turnover of employees, and fewer service user complaints. The ED workers experienced stress because of the high volume of acuity patients and the high volume of patients. However, Schmidt and Haglund (2017) found that repeated exposure to such conditions leaves the team members vulnerable to compassion fatigue. Accordingly, the current study highlights that effective teamwork can lead to the happiness of ED staff members. The findings of Alatawi et al. (2022) highlight the relevance of these findings in the Saudi healthcare sector, emphasising teamwork as a tool for improving performance. Thus, the current findings indicate that creating positive emotions within the ED teams can help to improve staff happiness in high-stress situations in the ED.

9.3.6 Conflict

In the ED, despite the MOH providing a treatment protocol for urgent cases, conflict still occurred among team members, as the participants mentioned. This study found that conflicts have delayed emergency services and negatively affected team interactions in the ED. Reeves et al.'s (2010) framework and this study found that conflicts often arise from disparities in professional opinions, especially in complex cases. Reeves et al. (2010) suggest that avoiding conflict completely can lead to poor decision-making, as team members may focus on

agreement over critical thinking. However, this case study has added some in-depth examples to the framework by identifying specific causes of conflict in the ED of KSA, such as long working hours and the consequences of stress. This study also emphasised the need for effective team leadership and trust-building to address conflict, which expanded on Reeves et al.'s (2010) concept of conflict.

Similarly, in the ED, Dreher-Hummel et al. (2021) found that three underlying factors impacted conflict during collaborative negotiation: 1) individual preferences towards triage systems, which represented the differing opinions among staff members about the effectiveness of the interprofessional team triage system; 2) individual role perceptions, which occasionally contributed to conflict between nurses and physicians; and 3) the management of perceived time pressure and the personal strategies employed to address this factor, which is an inherent part of emergency services. Chan et al. (2014) found other factors, indicating that conflict occurs within the ED consultation process, and distrust among team members can lead to conflict around a patient care plan. Chan et al. (2014) suggested that increasing trust among team members may resolve or decrease conflict during ED consultations. Nonetheless, conflict is a significant issue healthcare practitioners in KSA have been dealing with (Baddar et al. 2016).

Lake et al. (2015) indicated that as the complexity of a patient, problem, or task increases, multiple perspectives must be considered to ensure that this complexity can be addressed. Further, a key recommendation from the participants in this study was that a team leader should be responsible for making decisions in conflict situations. This indicates that conflict resolution can be challenging and requires an effective team leader who can evaluate the situation appropriately and consider the perspectives of all team members involved. Due to the complexity of emergency care, it is essential to make timely decisions and have effective team leadership. The team leader can consider the viewpoints of each member and increase the chances of reaching an appropriate decision. Thus, resolving and avoiding conflicts can improve teamwork and increase the pace of emergency services.

9.3.7 Factors outside the relational elements of Reeves et al.'s (2010) framework

Three factors emerged from the data and extended beyond the framework: forming relationships, harmony and compatibility, and disputes. Each factor is discussed below.

9.3.7.1 Forming relationships

To create effective teamwork in the ED, some participants suggested strengthening personal relationships among team members. Lapierre et al. (2019) identified that a lack of interpersonal relationships could lead to poor interprofessional communication. Rapidly changing care teams (Bekkink et al. 2018), disrespect, a lack of mutual help, and distrust all contribute to negative interpersonal relationships (Lapierre et al. 2019).

The study participants recommended mutual tolerance, overlooking team members' mistakes, and treating team members as friends or family members to build relationships and have a productive team. The current study's findings align with social network theory, which provides a theoretical framework for understanding the effects of social ties among emergency team members (Rasmussen et al. 2020). The theory states that relationships between individuals are of greater importance than their specific attributes since each individual within a network works as a fundamental unit, or ‘node’, in the complex interactions between team members (Knoke and Yang 2019).

The current study findings highlighted the importance of instrumental ties, as expressed in social network theory, which arise within a professional setting (Rasmussen et al. 2020). Therefore, when applied to the ED setting in KSA, instrumental ties enabled the staff members to perform within their unpredictable and challenging environment by playing their roles as nodes within an extensive network. Moreover, creating a social network can encourage the exchange of knowledge, expertise, and support among team members, enabling them to adapt quickly to the constant demands of emergency care. This mutual interdependence can create a sense of shared responsibility, where everyone’s contributions can boost the team’s impact.

9.3.7.2 Harmony and compatibility

The participants in the current study highlighted maintaining harmony and compatibility as factors that must be considered when creating effective teams. They indicated that interactions and communication are enhanced when team members work smoothly without tension. When harmony and compatibility occurred, members could find their interests and avoid obstacles when interacting with other team members. These findings align with the results of Zincirkiran et al. (2015), which highlight the importance of harmonious and functioning members within the healthcare sector in ensuring productivity. One possible

reason for the importance of harmony and compatibility within teams is the social nature of teamwork. Feeling comfortable and compatible with teammates creates a sense of psychological safety and trust (West and Chowla 2017).

Based on the participants' experiences, harmony among team members has been overlooked or not given enough attention within the ED team. As they indicated, it must be considered when building teamwork in the ED. Studies found that a lack of harmony among staff from different professions hindered effective teamwork in trauma services (Murphy et al. 2011; Edwards et al. 2012).

The participants in this study believed that ignoring harmony and compatibility may adversely affect team interactions and communication, which may jeopardise patients' safety. As a result, team members would be unable to interact and communicate effectively, which could negatively impact their emergency services. Therefore, these findings indicated that harmony and compatibility must be considered when creating an ED team to enhance communication and collaboration.

While there was potential to destroy communication and interactions among team members by eliminating harmony, Lovric et al. (2018) reported an excessively harmonious team to lack creativity and innovation. A team that always agrees and avoids conflict may result in superficial discussions and prevent them from achieving better work outcomes and opportunities for personal growth (Gallo 2018; Lovric et al. 2018). This illustrates the delicate balance between having a harmonious team that functions well and encouraging open discussion and diversity of opinion. While too much emphasis on harmony can stifle creativity, at the same time, it is essential not to create an environment that is hostile or uncooperative (Lovric et al. 2018). Thus, reaching a compromise that allows team members to express their opinions while maintaining respect and cooperation is crucial.

Therefore, in KSA, the ED must find a balance to ensure team members remain creative even within the limits of harmony and compatibility. In other words, the ED must find a way to support open communication, diverse viewpoints, and creative thinking while maintaining harmony and compatibility within the team. This support could involve allowing opportunities for constructive disagreements and valuing different viewpoints. The goal is to keep creativity and have a cohesive interdisciplinary team in the ED.

9.3.7.3 Disputes

In this study, the participants reported some significant barriers that they encountered when interacting with each other. On top of these barriers were interpersonal issues among team members. Even though the hospital's policy (Hospital Policy, Policy Number: LED-01-012) specifies that all employees should be committed to maintaining a harassment-free working environment, disputes among team members were reported, which caused dissatisfaction and hindered effective teamwork. Participants reported that these disputes negatively affected team interactions, preventing effective communication and collaboration and resulting in an unmotivated environment in the ED. They explained that whenever interpersonal issues arose among staff members, they stopped communicating with each other and avoided sharing patient information. Moreover, they demonstrated that disputes between members and leaders impacted members' psychology and ultimately impaired productivity. Several studies have shown that persistent conflict at work negatively impacts the work climate and negatively impacts individuals' psychological and physical well-being, including damage to the team environment, insomnia, distraction, anxiety, absenteeism, depression, fatigue, frustration, and extreme anger, family difficulties, and physical illnesses, such as heart disease, pain, migraines, headaches, indigestion, and intervertebral disc herniations (Almost et al. 2016; Parvaresh-Masoud et al. 2021).

However, team members in this study reported that losing the concept of working within a team, unfair distribution of tasks, incompatible personalities, disputes occurring outside the workplace, and long working hours were among the factors that contributed to personal issues. Parvaresh-Masoud et al. (2021) found other reasons in their literature review. They identified that the prehospital emergency work environment is more complex and stressful because of the unpredictability, long shifts, staff shortages, and a wide range of patients from medical to trauma, resulting in an increased risk of conflict among staff members. Consequently, the patient will bear the negative consequences of these personal issues, as there will be delays in emergency services delivery.

The findings of this study have considerable implications for the ED and the broader healthcare system. It is imperative to tackle interpersonal issues within the ED, as they can negatively influence the quality of teamwork and patient care. Team members must sustain effective communication and collaboration to ensure timely care delivery. Thus, addressing the root causes of interpersonal issues and improving work-group cohesion among team

members can assist in maintaining a healthy working environment and boost job satisfaction among team members. Some studies (Tourangeau et al. 2010; Cohen et al. 2021) focused on the positive aspect of group cohesion. These studies found that cohesion among healthcare providers increased satisfaction and reduced emotional exhaustion. This highlights the value of positive relationships and effective teamwork for enhancing productivity. When team members work together efficiently, they can accomplish more collectively than individually, as this study found.

Finally, the study findings underscore the significance of the relational factors in strengthening positive team dynamics and enhancing overall team functioning. Strategies to foster effective communication, build trust, manage conflicts, and foster cohesiveness should address these factors. By considering these relational factors, the ED teams can maintain stronger relationships, improve performance outcomes, and promote a positive and productive work environment in the ED.

9.4 Second Domain: Processual Factors

According to Reeves et al. (2010), processual factors, including time and space, routines and rituals, information technology, unpredictability, urgency, complexity, and task shifting, affect teamwork in various workplace contexts. These processual factors, as outlined by Reeves et al. (2010), illustrate some of the fundamental challenges and dynamics that team members experience within their work environment.

Data analysis identified seven factors in this case study related to the processual factors of Reeves et al.'s (2010) framework. Four of these, including physical environment, shift work, communication channels, and unpredictable environment and teamwork, are addressed within the framework, with this study expanding and providing examples of those factors. However, three factors were outside the framework such as violent patients' behaviour, non-urgent patients, and staff-patient communication.

These factors are classified as processual because they directly influenced the ongoing processes, interactions, and dynamics within teams in the ED. In addition, they influenced task execution, coordination, collaboration, and communication, highlighting the significance of adaptability, effective management, and responsive teamwork. Overall, Reeves et al. (2010) have outlined a list of procedural factors that provide an effective foundation for understanding team dynamics within the process they encountered while working.

9.4.1 Physical environment

In KSA, the ED was often busy and fast-paced, and the current case study showed the importance of a well-designed physical environment to promote interdisciplinary teamwork to provide emergency care. This aligned with Reeves et al.'s (2010) factor, notably the "Time and Space" theme. The physical environment in the ED, where team members worked closely together, promoted communication, performance, and coordination. This shared space supported rapid information exchange and decision-making, which aligns with Reeves et al.'s (2010) emphasis on how shared team spaces support interaction and teamwork. However, the physical challenges, for example, the distance between the nursing station and other departments and gender-segregated rooms, showed how fragmented spaces impeded interdisciplinary teamwork. This also aligned with the difficulties Reeves et al. (2010) identified when professionals are divided at their workplaces.

The current study revealed that all ED staff, including doctors, nursing assistants, and nurses, worked in one nursing station. Sharing one nursing station was a facilitator, which improved staff accountability, information sharing, decision-making between team members, role and responsibility clarification, and efficiency.

These facts are similar to Weaver et al.'s (2017) findings, who identified that uniting nurse and medical providers' stations effectively increased team connection and communication and improved patient care. Further, as team members met at one nursing station, they could easily find one another and deliver information more quickly. This study found that the nursing station was only five steps from the observation and resuscitation rooms, which allowed the staff to hear each other clearly and provide assistance rapidly. This supported the timely identification of a medical emergency and subsequent management, which could be imperative to saving a patient's life (Reddy and Spence 2006; Athlin et al. 2013).

However, one participant pointed out that the distance between the nursing station was far from departments such as radiology and the laboratory, meaning that the nurses spent some of their shifts walking between these units, which added to their workload and removed them from patient care. Increased workloads have been linked to reduced patient satisfaction, compromised safety, and morbidity (Michtalik et al. 2013; Watson et al. 2019).

Nevertheless, these findings are not unique to the ED in the Saudi context and apply to EDs in other countries. As I observed, the design of the ED allowed the team members to locate each other faster to provide the required support. Further, team members were more likely to

keep monitoring each other's tasks when they worked closely together. This made team members aware of their shared responsibilities and increased their motivation to fulfil them effectively. The proximity in their collaboration made it easier for individuals to understand each other's roles and responsibilities. This clarity mitigated ambiguity, reduced the possibility of misunderstandings or duplication of efforts, and optimised overall efficiency. Based on their literature review, Repper and Carter (2011) found that peer support has positive effects, ranging from improved self-esteem and confidence to reduced hospital re-admission rates. Improving peer support by developing a better work environment can improve the effectiveness of teamwork and enhance their capacity to provide services to ED patients. When the environment encourages peer support, success is more likely to be achieved (Raziq and Maulabakhsh 2015), as the staff members feel more comfortable sharing ideas, asking questions, and finding solutions.

9.4.2 Shift work

The findings on shift work in this study corresponded with Reeves et al.'s (2010) theme of "Routines and Rituals." Reeves et al. (2010) describe how routines can sometimes become so automated that they overlook team members' needs despite their importance. The shift work schedule in the ED was a structured routine that impacted team members' well-being and performance. However, participants in this study reported conflicting experiences: some reported that flexible shifts improved their work-life balance, mental health, and job satisfaction, while others complained about fatigue and sleep disturbances. This aligns with Reeves et al.'s (2010) debate regarding the risks of rigid routines, showing how inflexible shift work impacted staff well-being. Therefore, shift work can enhance or impede teamwork depending on how it is organised based on members' needs.

In relation to the current study, shift work impacted the well-being and influenced the emotional state of team members. However, it is critical to the delivery of round-the-clock emergency services. In this study, one participant, for example, viewed that the different shifts in the ED enabled the staff members to select the appropriate shift, and the option of shift work also allowed them to balance their personal lives. According to this participant, flexible shift work supported mental health and reduced absences. In addition, it helped the staff to have a positive attitude and the energy to deliver emergency services in the ED. Flexible shift work can improve the performance of employees as they feel more responsible, can manage their time at work, and fulfil their personal obligations (Ghimire 2020).

In contrast, another participant believed that variances in working hours can impact the well-being of staff members, particularly concerning the staff's circadian rhythms, causing fatigue and sleep disturbances. Several studies have identified that shift work can adversely influence human circadian rhythms, commonly acclimated to daytime wakefulness and night-time rest (Boivin and Boudreau 2014; James et al. 2017). Physiologically, circadian desynchronisation can alter hormonal levels, increase the risk of cardiovascular disease, produce sleep-cycle disturbances and lead to considerable fatigue (Jaiswal 2014). This study identified a significant association between shift work and staff well-being and performance. Some staff members believed flexible shift work was appropriate and helped them to perform better with their team, while others viewed it as a barrier putting their health at risk. The study highlights the importance of balancing the ED's operational requirements with staff members' well-being. Providing support and implementing flexible shift schedules may reduce shift work's negative impacts and improve the interdisciplinary team's performance and well-being in the ED.

9.4.3 Communication channels

Reeves et al. (2010) highlight the role of information technology (IT) in supporting communication within interprofessional teams, using tools such as email and web-based platforms to overcome time and location barriers. Likewise, the current findings revealed how communication channels, including intercoms and WhatsApp, played a significant role in the ED. In KSA, where rapid communication and the use of IT are essential due to the high patient flow, these channels facilitate quick coordination and efficient exchange of information.

This is an important contribution of the study as it revealed the efficiency of communication channels in the Saudi ED. Exchanging information promptly and effectively helped team members avoid duplication of efforts and ensured everyone had the information they needed to make informed decisions regarding patient care. Participants pointed out that this was especially important in emergency circumstances where time is critical, and delays in treatment might have major effects on patient outcomes. Although the study was conducted in a Saudi ED, the insights gained about communication channels might be extended to other EDs worldwide. Overcrowding and high patient volumes were not unique to a particular region, and effective communication remains a universal requirement in emergency care settings (Kilner and Sheppard 2010; Griffiths et al. 2014; Alsabri et al. 2020). As a result, this

study's findings can serve as a significant resource for other EDs seeking to enhance their communication techniques and teamwork.

9.4.4 Unpredictable environment and teamwork

The current findings align with Reeves et al.'s (2010) theme (Unpredictability) in hospital settings. Both found that while unpredictability in emergency care poses challenges, it also highlights the importance of interdisciplinary teamwork. In this study, the unpredictable nature of the ED created challenges, such as receiving patients who are beyond their capabilities, but it also provided opportunities for collaboration, knowledge sharing, and improving expertise. Similarly, Reeves et al. (2010) discussed that interprofessional teamwork is essential in high-pressure scenarios such as critical care but can be challenging due to the high demands of patients. They emphasised that healthcare teams must be adaptable to address these difficulties. This case study expanded on this and added real examples of unpredictability and the practice of interdisciplinary teamwork in the ED.

The current study revealed that these kinds of events could also create opportunities for team members to come together to share information and experiences, which can positively influence the team's performance. As a result of these challenges, team members developed their expertise in ED services. Whenever an anticipated case appeared, and the team members were uncertain how to handle it, they would approach other team members for guidance and support.

Following this, to provide emergency services, team members always needed a second opinion as well as the physical strength of their colleagues, for example, to move or change patients' positions. These positive perceptions of teamwork and its advantages vary from previous studies that concentrated on the obstacles of the unpredictable environment of ED. Some studies across the world highlighted the challenges of the ED work environment, such as stress, burnout, and overcrowding (Kilner and Sheppard 2010; Griffiths et al. 2014; Alsabri et al. 2020) rather than highlighting these opportunities, as the current study demonstrated.

The participants noted that this unpredictability strengthened team relationships and promoted creativity in emergency care. They also indicated that the variety in daily tasks prevented boredom, making staff engaged and motivated. Bijani et al. (2021) also found that working together to provide pre-hospital emergency care allows staff to assess, prioritise,

plan treatment, save lives, help patients recover, and retain adequate knowledge of most specialities. However, the challenges ED teams face in KSA regarding unpredictability are similar to those experienced by ED teams in other countries (Gregov et al. 2011; Mass et al. 2022). Interdisciplinary teamwork and collaboration are essential and should be prioritised in any ED environment where quality of care and patient outcomes are paramount. Thus, considering the opportunities created by these challenges, healthcare professionals in the ED can develop their expertise and provide the best possible care to patients, thereby improving the overall quality of emergency care services in the country.

9.4.5 Factors outside the processual factors of Reeves et al.'s (2010) framework

Three factors emerged from the findings and were not included in the framework. These were violent patient behaviour, non-urgent patients, and staff-patient communication. Each factor is discussed below.

9.4.5.1 Violent patients' behaviour

Data analysis of the semi-structured interviews revealed that violent behaviour by patients and their families formed a significant barrier to the practice of teamwork in the ED. The findings of this study indicated that a violent patient's behaviour not only affected the staff members but also the practice of interdisciplinary teamwork. When patients were unhappy, they created an unpleasant work environment in the ED, affecting the mood of the team members and causing fear among team members. As a result, team members were nervous and unhappy, which negatively affected their communication and interactions. Violent patients' behaviours can disrupt staff and other patients, causing both to become distracted and defensive, which can delay treatment and increase waiting times (Angland et al. 2014; Berlanda et al. 2019) and impact the quality of life of the staff members (Breivik et al. 2008).

Violence against healthcare workers is a significant issue in the UK and worldwide (Angland et al. 2014; Berlanda et al. 2019). Alshehri (2017) conducted a quantitative study in KSA and found that 383 of 436 nurses (88%) had experienced at least one episode of violence during the previous 12-month period. Although the current study found that the Saudi MOH has imposed penalties on individuals who verbally abuse or attack health workers, the abuse continues to occur in the ED. The team members have reported that patients and their relatives had physically and verbally abused them. According to the current study, alcohol and drug use, mental health issues, disrespect of the team members, unhappiness about

waiting for treatment, staff shortages, and poor communication by staff members contributed to patients' violent behaviour in the ED.

Additionally, the relatives of critically ill patients became tense and angry, causing them to abuse team members. These reasons are consistent with the findings of Alshehri (2017), who reported that several factors predispose perpetrators to physical violence, including mental illness, being psychiatric patients, long waiting times, alcohol and drug intoxication, and the effects of diseases and pain.

It appears that the violent behaviour caused a significant barrier to the practice of teamwork in the ED. These findings provide a strong message for the MOH and the hospital management, who are responsible for the ED, to pay extra attention and provide security for their staff members.

9.4.5.2 Non-urgent patients

Based on the participants' responses, many non-urgent patients used the ED despite the availability of other health services in the country. Similarly, in KSA, Alyasin and Douglas (2014) found that 63% of people attend the ED because they do not have a regular healthcare provider (63%), 62% because they can receive care on the same day (62%), and the convenience of and access to medical care at any time (62%). Likewise, Almulhim et al. (2021) found that 49.6% of 915 respondents to a cross-sectional study conducted through an online questionnaire would prefer to visit the ED in KSA. They found that the most common reason for choosing the ED over primary healthcare was that the ED provides quick medical service, while advice from another person was the least common choice (Almulhim et al. 2021).

The current study added to the reasons for non-urgent visits to the ED, namely the provision of free health services and medications, patients lying about symptoms to obtain sick leave and quick and easy access to health services. In addition, it was found that non-urgent patients may not be aware of diseases or the appropriate health services and, as outlined in Chapter Seven, these findings indicated a deficient triage system in the ED, particularly under Category V, which also had implications for inappropriate self-referrals.

These non-urgent cases caused negative effects, including overcrowding, misuse of time and resources, increased job burden, and drained team members' energies. As a result, they were often exhausted and could not provide their best effort when experiencing emergency cases.

As a result of overcrowding in the ED, medical errors are also more likely to occur (Liu et al. 2009). Overcrowding is associated with higher mortality rates and longer hospital stays. Furthermore, it leads to employee burnout, moral injury, and the loss of highly skilled emergency care providers (Cardoso et al. 2011; Boyle et al. 2021).

In this regard, addressing the issues related to non-urgent cases and overcrowding in KSA's ED is imperative. An effective triage system must be implemented to reduce non-urgent visits, facilitate access to appropriate primary care services, and increase patients' healthcare literacy. In addition, increasing the number of staff and emergency beds is important to ensure timely and effective emergency care.

9.4.5.3 Staff-patient communication

The challenges of different languages were not limited to the staff members; they also extended to the ED patients. Arabic-speaking patients were unable to understand the English spoken by overseas staff members. The inability to understand the English language dissatisfied the patients and directly obstructed the provision of emergency services. The findings are similar to those of previous studies (Halligan 2006; Aljadhey et al. 2014; Almutairi et al. 2015), which identified that nurses in Saudi hospitals struggled to communicate with patients because of language barriers, which made it challenging to establish excellent relationships with patients.

There is a well-established connection between miscommunication and poor patient outcomes (Turner et al. 2018). A lack of effective communication in healthcare leads to delayed treatment, misdiagnosis, medication errors, and patient injury or death (Kilner and Sheppard 2010; Alkhaqani 2022). This indicates that linguistic barriers can slow the workflow and hinder the ED's efficiency. As highlighted in this study, the efforts to translate information back and forth or seek interpreters can be time-consuming, resulting in delays in patient care and potential overcrowding of the ED. Improving the effectiveness of communication in healthcare is a worldwide priority. According to Alderson (2009), high levels of linguistic competence are essential for safe communication in the related context because certain concepts can be interpreted differently across cultures. As a result, effective cross-cultural communication is crucial to prevent confusion and misinterpretation that may negatively affect staff-patient collaboration (Alderson 2009; Ladha et al. 2018).

On the other hand, the participants also reported that the diversity of nationalities and languages benefited non-Arabic staff and patients. In a situation when international staff had patients who spoke similar languages, they helped facilitate communication. As a result, services were delivered faster, and communication barriers were avoided.

Based on the findings, there was a lack of translation services, which made team members employ staff who could translate Arabic into English and vice versa. It has been found that a well-trained interpreter maintains effective communication, increases satisfaction, and protects patient safety (Kalina 2015; Aitken 2019). Effective teamwork was also found to prevent poor communication between patients and caregivers, which would otherwise promote patient dissatisfaction, which was in line with the findings of Lazure et al. (2014) and Ahmadpour et al. (2021).

Several solutions are possible to address these challenges. One approach is to provide language training to healthcare workers to facilitate communication with patients from different cultural backgrounds. Another approach is to employ translation services or interpreters to facilitate communication between patients and healthcare workers (Yelland et al. 2016). This can be especially important for patients with limited proficiency in Arabic or English.

Finally, the processual factors found in this study significantly influenced interdisciplinary teamwork in the ED. Based on the present study's findings and the literature, teams can mitigate their adverse effects and optimise their performance by recognising and understanding these processual factors. Creating a supportive physical environment, implementing appropriate shift scheduling, providing training and resources to deal with uncertainty, implementing strategies for managing aggressive behaviour, developing triage protocols for non-urgent cases, and improving staff-patient communication are vital to effectively manage ED services and interdisciplinary teamwork. This can also strengthen coordination, promote collaboration, and improve communication within the ED, allowing teams to work more efficiently and effectively.

9.5 Third Domain: Organisational Factors

According to Reeves et al. (2010), organisational factors are related to the local environment in which the interprofessional team operates and how organisational structures impact interprofessional teams. Reeves et al. (2010) outlined three key organisational factors:

organisational support, professional representation, and fear of litigation. The organisational factors extend beyond individual characteristics and processual factors to include the broader influence of the organisation on teams. However, after analysing the findings, two factors emerged in this case study related to the "Organisational Support" theme of Reeves et al.'s (2010) framework. These factors are staff shortages and unresponsive management.

9.5.1 Staff shortages

According to this study, staff shortages created challenges and barriers to interdisciplinary teamwork, especially with the rapidly growing population and increased demand for emergency services in the KSA's ED. Reeves et al. (2010) and the current study emphasise the value of organisational support in offering the needed resources to interdisciplinarity teams. The participants in this study highlighted how the lack of human resources in the ED negatively impacted team dynamics and patient satisfaction.

All the participants in the interviews acknowledged that there was a staff shortage in the ED. This finding was consistent with Almalki et al. (2011) and Aboshaiqah (2016), who recognised a shortage of nurses in KSA. Staff shortages were a major barrier to team members and emergency service delivery. In previous studies, a higher nurse-to-patient ratio was related to better patient outcomes (Chan et al. 2010; Schilling et al. 2010).

However, the current study added a novel finding for the context of KSA. This study found that some Saudi nurses worked in non-clinical positions in health administration departments instead of their clinically focused jobs, resulting in a lack of clinical staff. In addition, participants explained that some team members may lack self-confidence, which made them stressed and fearful of providing emergency treatment and making medical errors. Similarly, Bragard et al. (2015) illustrated that worrying about making mistakes at work can also be a source of stress in the ED. In the current findings, some staff avoided working in the ED, which caused staff shortages and impacted their relationship with the other team members. Avoiding work in the ED made other team members perceive that these members were negligent and unwilling to help others, which weakened team unity as these members were uncooperative. In this study, the participants stated that staff shortages may cause employees to feel psychologically or physically stressed. Similarly, cumulative stress has been linked to adverse health outcomes and lifestyle behaviours, such as sedentary lifestyles, substance abuse, mental illness, burnout, early retirement, and premature cardiovascular disease. (Chandola et al. 2008; Flowerdew et al. 2012; Kouvonen et al. 2013).

The participants in this study also indicated that the lack of staff increased the length of patient stay, resulting in frustration and dissatisfaction. Pines et al. (2008) demonstrated that patient satisfaction correlates with the length of stay in the ED. Waiting longer may cause patients to feel anxious, frustrated, and uncomfortable (Shankar et al. 2014; Xie 2017). Their concerns might not be addressed quickly, contributing to dissatisfaction. In contrast, patients tend to feel more satisfied when they wait less and receive prompt attention (Xie 2017). Hospitals with a high patient-to-staff ratio are more likely to experience medical errors (Madsen et al. 2014; Bridges et al. 2019).

To address staff shortages, the participants reported that they sought assistance from other units. A lack of experience was evident among the staff from different departments due to a lack of experience. This finding is compatible with Lapierre et al. (2019), who reported that incorporating new professionals into EDs impacts teamwork. Therefore, staff from other units can negatively impact the effectiveness of interdisciplinary teamwork, especially their role dynamics, in KSA or globally. Studies show that hospitals in many countries are forced to use novice nurses in EDs due to a shortage of experienced nurses (Salonen et al. 2007; Patterson et al. 2010; Zahedi et al. 2013). The data analysis shows that having enough teamwork experience and knowing each other and the work procedures were essential factors for successful interdisciplinary teamwork. Participants in this study believed that team members need to know each other and the work procedures as this can contribute to accelerating ED health services.

This study emphasises the importance of developing and retaining experienced staff in the ED, suggesting that in the ED setting, efforts should be made to attract and retain experienced staff. To facilitate this, professional development opportunities and a supportive work environment could be created to encourage experienced staff to remain in the ED. Furthermore, when incorporating new professionals or staff members from other units, it is imperative to recognise the unique challenges of the ED environment. They should receive adequate training and mentoring to facilitate their interactions and ensure they acquire the needed skills and knowledge. It would also be beneficial to develop competent and experienced ED staff by cultivating a culture of continuous learning and professional growth (Price and Reichert 2017). These findings also have implications for healthcare policymakers and providers in KSA and other countries experiencing similar staff shortages in the ED.

9.5.2 Unresponsive management

Reeves et al.'s (2010) framework and the current findings highlighted that organisational support is fundamental for effective interdisciplinary teamwork. For teams to function effectively, management must provide the required resources and create a supportive environment. In this case study, unresponsive management practices, such as lack of training in teamwork, nepotism, and being unapproachable, negatively affected team morale and performance. The participants were dissatisfied with the management's insufficient support and fairness, which weakened teamwork. While Reeves et al. (2010) focused on the role of organisational support in encouraging team autonomy, this study revealed how the lack of support can undermine team dynamics. To achieve Vision 2030 goals, teams in the ED need significant organisational support to enhance performance and improve emergency care.

The findings obtained from the current study are unique to the study's context and suggest that the hospital management did not provide teamwork training to ensure effective collaboration in the ED. Researchers have found formal ED teamwork training to effectively enhance team behaviours and communication, reduce errors, elevate staff attitudes, and increase patient safety (Jones et al. 2013).

Furthermore, there was wide criticism of the hospital's management by the participants in this study. The management exhibited several deficiencies, including nepotism, being unapproachable, and disregarding the staff shortage. Further, there was perceived favouritism amongst managers, in which certain individuals were given preference over other people, with family members and friends receiving benefits such as flexible shifts, transfers to places where they enjoyed working and expediting their administrative procedures. Alotaibi et al. (2016) also found that favouritism in Saudi hospitals influenced nurses' satisfaction. Showing favouritism toward specific groups of ward nurses can lower the morale of those who are aware that their colleagues are enjoying extra perks while their performance goes unnoticed and is undervalued (Saleh et al. 2018). Consequently, these employees may feel neglected and unmotivated (Saleh et al. 2018). Leaders who practice favouritism in the workplace cannot establish a culture of trust (Whipple 2012).

Another participant stated that the management was unfamiliar with staff work schedules and the distribution of responsibilities, making them feel overwhelmed and unvalued. This suggests that when management is unaware of the distribution of duties, they may unintentionally overwhelm certain staff members and leave others with fewer responsibilities.

As a result, those overwhelmed can become frustrated with this imbalance and experience stress (Maslach and Leiter 2016).

The data also suggested that the management did not consider the team members' opinions regarding the decisions affecting the ED. If employees' opinions are ignored, they may feel undervalued and disengaged from their work. Their motivation to contribute positively to the department's targets may decline, negatively affecting their productivity and performance (Nguyen and Pham 2020).

One participant described how a team member gave a patient the wrong medication, and as a punishment, the entire team was given an extra shift. The participant described this as a poor decision made by the hospital management; as a result, it affected the performance of the employees and made them resentful. This finding contradicts Adam's equity theory, which indicates that individuals assess the fairness of their relationships and interactions by balancing their inputs (efforts, contributions) with their outcomes (rewards, benefits) (Adams 1963). Considering the team members' complaints about the employer's decision to impose an extra shift, the additional workload was inconsistent with their contributions and would lead to negative emotions, negatively affecting morale and performance. Based on Adams' equity theory, organisations must ensure that consequences are proportionate to employees' contributions to ensure a positive work environment (Adams 1963). Thus, applying Adam's equity theory to an ED in KSA can help to enhance fairness and equity at work. Punishing the entire team for one person's mistake created a sense of injustice and inequity among the staff members, potentially affecting their motivation.

According to Bakker and Oerlemans (2016), satisfied employees were happier in their jobs, enjoyed their work, exhibited less burnout, and were more likely to remain on the job. Organisational effectiveness highly depends on employees' happiness, measured by morale, positive attitudes, and general well-being (Fisher 2010). Fulfilment and happiness in the workplace can lead to more enthusiasm and engagement among employees (Tomic and Tomic 2011). Therefore, the interplay between Adam's equity theory, the consequences of collective punishment, and the importance of employee satisfaction emphasises the importance of fairness, equity, and effective management are key to the success of teamwork in the ED.

Therefore, the hospital management should consider alternative approaches to dealing with individual errors without negatively affecting all the team members. It is, therefore, necessary

to create a fair and transparent system focused on personal responsibility and providing support for learning from mistakes. To achieve this, it is necessary to conduct effective investigations to determine the root causes of errors, provide appropriate training and feedback, and develop strategies to prevent future errors. Direct communication between management and staff may help address concerns and grievances about fairness and equity (Edelman et al. 2017). Feedback sessions, employee forums, and collaborative decision-making processes can create a more supportive work environment between staff and management (Adams et al. 2019).

9.6 Fourth Domain: Contextual Factors

Various contextual factors that affect how individuals perceive and interact with each other can ultimately impact teamwork (Reeves et al. 2010). Based on the framework that Reeves et al. (2010) proposed, contextual factors consider the broader social, cultural, and economic factors that influence IPT. The findings of this study revealed two main contextual factors, cultural diversity and gender segregation, which are particularly related to the diversity and gender themes of Reeves et al.'s (2010) model. The presence of staff members from various cultural backgrounds and nationalities within the ED setting greatly affected the way team members interacted and worked together. Understanding and addressing these contextual factors are crucial for the ED to create an environment that supports effective interdisciplinary collaboration, embraces diversity, and promotes positive team dynamics.

9.6.1 Cultural diversity

In KSA, because most physicians and nurses were international from various countries, cultural and language differences hindered teamwork and contributed to a high staff turnover rate, which reduced team cohesion. Hai-Ping et al. (2020) also found that cultural values influence how doctors and nurses work together in EDs in China. The study revealed a gap between superiors and subordinates, doctors and nurses, and staff from other parts of China (Hai-Ping et al. 2020). Hai-Ping et al. (2020) focused on Chinese ED staff only rather than staff from different countries who speak different languages. The current study and the study of Hai-Ping et al. (2020) indicated that cultural diversity may influence collaboration in terms of teamwork.

However, the current findings align with Reeves et al.'s (2010) claim regarding how professional socialisation and cultural diversity influence teamwork. While Reeves et al. (2010) pointed out that diversity within health and social care teams can offer many advantages, such as fostering innovative collaborations, they also noted that it can create challenges, such as misunderstandings, conflicting values, and inequalities in pay, status, and power, which hinder effective teamwork. They also outlined how these differences can lead to misunderstandings and make teamwork more challenging, especially when team members have different values. In addition, diversity can lead to inequalities in economic rewards, social status, and professional power, which can hinder interprofessional collaboration (Reeves et al. 2010). This study confirmed these challenges and added examples such as salary discrepancies according to nationality, which led to staff turnover and hindered team cohesion in KSA. The following section discusses discrepancies in salaries.

9.6.2 Discrepancies in salaries

Based on the data, there were discrepancies in salaries and differences in job benefits between nationalities. Despite the hospital's Code of Conduct and Ethics (Policy Number: LED-01-012) prohibiting discrimination based on race, ethnicity, religion, age, nationality, or sexual orientation, this policy did not appear to be applied in practice. Although team members performed similar tasks, Saudi employees earned more wages than their counterparts from other countries. These discrepancies undermined trust and fairness among staff and negatively impacted the practice of effective interdisciplinary teamwork in the ED. Moreover, several international employees had resigned, resulting in a staff shortage, as noted by the participants. If wage disparities are based on nationality rather than legitimate performance-based distinctions, this can be viewed as unfair and discriminatory (Alshareef et al. 2020).

The literature suggests that this finding is not unique, as Alshareef et al. (2020) also identify that the leading cause of turnover among international nurses in KSA is unfair, with unequal salaries for different nationalities. To create an inclusive and positive work environment for employees, healthcare organisations must adhere to non-discriminatory policies and practices. This issue could be resolved by aligning pay scales so that job responsibilities, qualifications, and experience rather than nationality determine salaries. Identifying and removing nationality-based discrimination in the workplace could improve the hospital's work environment by rewarding employees based on their contributions. Thus, establishing a

supportive work environment where individuals from different cultures feel valued and respected could attract and retain a diverse talent workforce and maintain team cohesion.

9.6.3 Perceived national differences

In addition to Reeves et al.'s framework on how professional cultures influence teamwork, this case study revealed how cultural biases led to discrimination and prevented collaboration in the ED. Including discrimination within Reeves et al.'s factors would provide an understanding of their influence on team dynamics and cohesion, especially in the ED of KSA. The participants in this study revealed that staff from similar nationalities tended to unite and simplify tasks among themselves, such as smooth handover and showing disregard for other nationalities.

In addition, members of the same nationality tended to favour one another in evaluating staff performance. Thus, they may have been more willing to give their compatriots the benefit of the doubt when evaluating their work, with a tendency to be more objective and serious when asked to assess the performance of people from different nationalities. Participants perceived the intent of such behaviours as dominating the department, expelling other nationalities, and ensuring that other nationalities could not expel them from the unit or workplace.

Similarly, Al-Turki (2019) found that a group of Filipino nurses was dominant in a Saudi hospital unit. As a result of this dominance, non-Filipino colleagues suffered inequity and discrimination. For example, this included abuse towards Western nurses, which led some to leave the unit, unfair assignment of tasks for Saudis and other ethnic groups, and an unwelcoming work environment for newly arrived Indian nurses by the dominant Filipino group (Al-Turki 2019). French and Swain (2008) found that discriminatory treatment based on ethnic differences typically resulted in disempowering outcomes for those who experienced discrimination.

Al-Turki (2019) found that overseas nurses in KSA experienced double cultural emotional distress due to their immersion in a different culture, exacerbated by interacting with various ethnic groups. Due to such immersion, they faced barriers such as frustration, fear, insecurity, and incompetence in adjusting to their new cultural environment, which also affected their patient interactions. They were unaware of the acceptable nursing practices in Saudi culture, adversely affecting their professional performance and the quality and safety of their care (Al-Turki 2019). Similarly, this study also found that language differences separated staff and

added to cultural and ethnic challenges. As a result, communication, teamwork, and inclusion in the ED were disrupted.

The current study and existing literature shed light on the need to address cultural differences and encourage a more inclusive work environment. Findings suggest that cultural competence should be promoted among healthcare practitioners, ensuring they have the knowledge and skills to navigate diverse cultural contexts. Developing training programmes and initiatives that foster intercultural communication, empathy, and mutual respect can alleviate barriers and enhance collaboration among nationalities (Lorié et al. 2017). In addition, diversity, equality, and inclusion should be addressed in hospital policies. Policies must clearly emphasise that all forms of discrimination, including nationality-based, are unacceptable. Thus, enforcing these policies, addressing discrimination, and ensuring an inclusive ED environment is important.

9.6.4 Gender segregation

This study and Reeves et al. (2010) emphasised the impact of gender dynamics on teamwork. They examined how patriarchy creates power imbalances between male-dominated professions, such as medicine and female-dominated roles, such as nursing, which undermine effective collaboration. These imbalances impede collaboration by reinforcing hierarchies, with men in higher authority and women in subordinate positions (Reeves et al. 2010). Similarly, this study highlighted how gender-related barriers can restrict effective collaboration, but it expanded on Reeves et al.'s (2010) model by highlighting how cultural practices such as gender segregation shaped the unique context of KSA. They both indicate that gender barriers hinder fairness and cohesive interdisciplinary teams. However, the KSA's Vision 2030 aims to reduce segregation, encouraging balanced collaboration between males and females, especially in healthcare, which may eliminate gender-related barriers in the ED.

In KSA, gender segregation is prevalent in almost every public and private institution (Alhazmi and Nyland 2015). Thus, the interactions between genders, whether patient-staff interactions or among the team members, were challenging and caused barriers in the ED. Formerly, there were two EDs, one for males and one for females, which was in line with Saudi culture, as participants stated. However, at the time of data collection, I observed that gender segregation had diminished, and the two genders were merged into one section, each with its own room.

Despite these efforts to reduce gender segregation, obstacles still occur when dealing with another gender. The participants explained how male staff members provided the services to female patients. Participants mentioned that they sometimes have concerns when dealing with female patients because some female patients refuse to allow male staff to interact with them. This refusal resulted in a female employee replacing the male employee. Similarly, Al-Turki (2019) found that some female patients in KSA refuse to be examined by male staff members.

The participants in the current study also mentioned that some Saudi female nurses did not always deal with or converse with male employees because of embarrassment. In this case, those embarrassed females employed a third female colleague to deal with males to deliver information and interact with males without restrictions. This intervention resulted in indirect contact and interaction between genders, causing a delay in information flow, poor interaction among team members, and, consequently, delays in patient care.

In addition, a lack of solidarity among co-workers can result in physical, mental and emotional exhaustion as well as distress and illness, which can negatively affect the quality of services provided in the workplace (Vieira and Chinelli 2013).

The findings of this study highlight the need to eliminate gender segregation to ensure effective interaction among the ED staff. Engagement among staff needs to be without gender restrictions, and staff members need to be educated about the adverse effects of gender segregation by raising awareness among them. Training and workshops on gender biases and inclusive practices could be provided to encourage a more informed and diverse mindset. By eliminating gender segregation and fostering inclusive practices, the ED can create an environment where all staff members can interact and collaborate freely, thus leading to more effective teamwork and better staff satisfaction.

These findings provide unique insights into the hospital's culture, suggesting that it does not provide adequate support to ensure effective interdisciplinary teamwork and mitigate cultural barriers within a multicultural health organisation. A lack of literature exists on organisational support through policies and standards in the context of gender segregation, but this study highlights a requirement for trans-cultural education to tackle challenges among multicultural staff regarding cultural awareness, as the staff in this study were inadequately prepared. By acknowledging and addressing the influence of these factors, the

team members can work towards establishing an inclusive and supportive environment that enhances teamwork and helps patients who seek emergency services.

9.7 Fifth Domain: Individual's Factors

This case study added significantly to the framework proposed by Reeves et al. (2010) by incorporating individual factors not addressed within their model. These factors played a major part in the interdisciplinary team in the ED. Notably, individual factors found in this case study, such as the emotions of individuals, experience and support, multitasking skills, stress management, and ability to perform effectively in fast-paced situations, significantly influenced the overall interdisciplinary teamwork in the ED.

These factors require a separate domain for several reasons. First, these individual factors significantly impacted each team member's performance and behaviour, directly influencing the overall interdisciplinary functioning. For example, the emotional states of individuals affected how they communicated, made decisions, and interacted with their colleagues and patients. Second, past experiences and skills, such as multitasking ability, stress management, and ability to perform effectively in fast-paced situations, influenced their behaviour. For example, processual factors and patient care ultimately shape the outcomes of interdisciplinary teamwork in the ED. The data analysis indicated that members with these skills managed patient needs and collaborated effectively with the team, while others lacking ED experience and skills slowed down the team's progress. Thus, these individual factors must be considered when exploring the factors that influence the practices of interdisciplinary teams. These factors are discussed in detail below.

9.7.1 Multitasking skill

This study found that the ED team often faced high demands and had to multitask due to the complexity and volume of their workload. As defined by the participants, multitasking is the capacity to perform numerous activities simultaneously while ensuring patients' well-being and quality of treatment in the ED. The participants revealed that when multitasking talent is used effectively, it may save time while enhancing productivity. This current study found that being an efficient multi-tasker in the ED was paramount and required patience and significant mental ability to avoid stress. This was perceived as particularly important because of the unpredictable nature of the ED environment and the need for health practitioners to work on multiple tasks that require immediate attention simultaneously.

These findings aligned with the literature that identified that multitasking involves coping with interruptions, prioritising tasks and returning fluidly to the original task, with emergency physicians needing to be able to switch between controlled tasks intelligently with minimal error (Heng 2014).

Similarly, Augenstein et al. (2021) conducted observations in an academic ED in Germany and found that multitasking is often unavoidable and associated with increased stress and situational awareness among ED physicians. This finding suggests similarities among research regarding the importance of multitasking skills in EDs. Healthcare professionals in KSA's ED would likely benefit from knowing how multitasking can affect their productivity and stress levels.

Additionally, this study emphasises the need for patience and significant mental ability while multitasking in the ED, which could help ED team members in KSA to understand the demands of the job and how to cope with them effectively and avoid stress. Providing targeted training programmes or teaching healthcare professionals how to multitask efficiently could be beneficial (Heng 2014). This training could incorporate techniques for managing interruptions, setting task priorities, and returning seamlessly to original tasks.

9.7.2 Stress management skill

Another teamwork skill that the participants revealed was stress management. As a result of the high work demands, exposure to life-threatening cases, and long working hours, staff described how they may experience stress, burnout, or poor interpersonal relationships. Stress is continuously present for healthcare workers, especially ED professionals, due to the responsibility of their work (Gota et al.2017). Consequently, these high-stress jobs can cause dissatisfaction at work and health problems (Azevedo et al. 2017), exhaustion (Munnangi et al. 2018), as well as poor quality of sleep (Han et al. 2016). The correlation between high-stress jobs and job dissatisfaction, health problems, exhaustion, and poor sleep quality sheds light on a cycle of challenges that can adversely affect both personal and professional aspects of the lives of these staff.

However, the current study further explored the consequences of stress on the staff in the ED and revealed that stress led to forgetfulness when delivering emergency care. In other words, due to their work's mental strain and pressure, they may forget important information and steps in providing care. Based on the participants' accounts, forgetfulness increased the

likelihood of medical errors, which can have devastating consequences for patients. Executives and risk managers in the healthcare industry recognise that stress often accompanies medical errors (Rodziewicz and Hipskind 2020).

Caponnetto et al. (2018) found that stress management training can improve the quality of life, motivation, burnout, and stress perceptions of the staff in emergency rooms, which can eliminate the errors caused by stress and burnout, while this current study revealed the importance of teamwork in preventing forgetfulness and improving patient care. This study found that a collaborative team can act as a reminder for each other, ensuring that necessary services are delivered promptly and accurately to emergency patients.

Further, effective coordination among team members was identified as crucial in decreasing the likelihood of errors caused by forgetfulness. By embracing the findings of both studies (Caponnetto et al. 2018) and the current research, EDs in KSA and other countries could implement stress management training programmes to address staff well-being and foster a teamwork culture. These initiatives could enhance job satisfaction and reduce burnout (White et al. 2021). Therefore, by providing the necessary support, resources, and training, EDs can create a conducive environment that fosters the well-being of ED staff and ensures the delivery of high-quality emergency care.

9.7.3 Fast-paced performance skill

This study revealed that the team members in the ED must acquire a significant skill, namely fast-paced performance, to address the issue of long waiting times caused by overcrowding in the unit. The participants stated that this issue could threaten patient safety and delay assessment and treatment. The study also revealed that team members must aim to complete their examination of each patient within 10 minutes and consider the time required to ask specific questions relevant to the patient's diagnosis. According to the participants in the current study, taking a patient's medical history and diagnosing their condition promptly are crucial skills that ED teams must possess.

Similarly, Curtis et al. (2020) highlighted the importance of efficient and timely care, finding that timely recognition and treatment of acutely ill and injured patients at the appropriate health system levels is essential to maintaining high quality and safety in healthcare. Emergency staff assess and provide care for patients of all ages, with varying clinical urgency and illness severity (Curtis et al. 2020). Failure to identify and respond to clinical

deterioration during emergency care increases the chances of high mortality and adverse events (Curtis et al. 2020). Thus, team members must possess skills beyond medical expertise and the ability to work effectively in a fast-paced environment. Team members must manage their time proficiently and remain focused despite stressful circumstances.

Nonetheless, it is essential to maintain a balance between speed and accuracy since rushed assessments may result in missed diagnoses or insufficient evaluations (Ulrich and Kear 2014; Rodziewicz and Hipskind 2020). To achieve this balance, healthcare professionals in the ED need an appropriate training programme. Besides being adept at clinical techniques and possessing medical knowledge, they must also understand how to communicate effectively. The team in the ED must rapidly obtain essential information from patients and their families, extract critical details, and make accurate decisions. These actions allowed the team to work effectively under pressure and provided collaborative, timely emergency care. Thus, these findings must be considered to ensure quick assessments and effective interdisciplinary teamwork in the ED.

9.7.4 Individual's emotions

A further finding of the current study was that team members' emotions could be barriers and enablers to teamwork. The practice of teamwork was adversely affected by several negative emotions associated with negative behaviours. A negative attitude towards a patient's behaviour, stress, or personal issues were identified as barriers to effective teamwork, while positive emotions were identified as enablers. Lapierre et al. (2019) identified further factors that impact trauma teams' performance and communication, such as emotional states, fatigue, and distractions.

The current study investigated in-depth how negative mood can impact ED team interactions. As the participants indicated, the issue extended beyond one person's bad mood, as the mood weakened communication within the team and resulted in slow, unexciting work from this individual. These findings correspond with the Appraisal Tendency Theory, offering insight into how emotions can act as barriers and enablers of effective teamwork (Cavanaugh et al. 2007). Appraisal Tendency Theory describes how perceptions shape individuals' emotional reactions to situations (Cavanaugh et al. 2007). According to the theory, individuals respond differently based on the positive or negative aspects they focus on when judging a situation (Cavanaugh et al. 2007; Heyhoe et al. 2016). As demonstrated in the study's findings, team members' emotions were a vital factor in influencing the quality of teamwork since they

could hinder or facilitate collaboration, corresponding with the Appraisal Tendency Theory, which illustrates how individuals' appraisals or judgments of situations shape their emotional responses. As the findings presented in Chapter Six (section 6.6.4) demonstrated, negative mood adversely affects relationships and negatively influences team performance. Similar findings were identified by De Jong et al. (2013). These findings are significant since the delivery of services in the ED must be rapid to save patients' lives (Pines et al. 2008; Napi et al. 2019). Heyhoe et al. (2016) expounded on the role of emotions in patient safety, given the charged nature of the healthcare setting.

Because emotions can influence ED staff decisions in KSA, ED management needs to find a way to motivate its team members to be consistently positive and proactive in providing timely and urgent services.

9.7.5 Experience and support

The current findings demonstrated that individual experience and support contributed to the effectiveness of interdisciplinary teams in the ED. Experienced team members made quicker, more informed decisions, resulting in faster processes and better patient care. The participants' assertions about the value of experience are consistent with the literature. For instance, Yaghmaei et al. (2022) found that experience is imperative for effective teamwork in the ED. As they noted, inexperience can lead to difficulties, but over time, novices are able to gain experience in their roles. This was reflected in the participants' observations regarding novices struggling in critical situations, such as CPR. Based on the data analysis, a lack of familiarity with procedures, systems, and critical protocols can delay decision-making and impede effective operations in the ED. Thus, having experienced members reduced delays and ensured effective operations. Likewise, Plummer and Copnell (2016) found that staff with more ED experience will likely have better attitudes towards teamwork. This created a supportive environment since they were more comfortable working together. The participants reported that having a supportive environment where they feel confident asking questions could boost their performance and overall experience. Furthermore, the participants' examples of immediate, unquestioning assistance demonstrated how teamwork can succeed when individuals willingly help without hesitation. Both Plummer and Copnell (2016) and Milton et al. (2022) demonstrated how this type of support, along with experience, could strengthen teams.

The current case study revealed that experience and mutual support were the foundation of effective interdisciplinary teamwork. This is supported by the literature, which shows that these factors improve team members' relationships and performance.

9.8 Summary of the Application of Reeves et al.'s (2010) Conceptual Framework

The conceptual framework directing the discussion of the current findings suggests that relational, processual, organisational, and contextual dominos affect interprofessional teamwork in different ways. However, this case study exemplified and expanded upon these dominos, as these domains were demonstrated by real-life examples from the current case study. Below is a summary of these four dominos in relation to this case study, along with a new fifth domain that emerged, namely individual factors.

9.8.1 Relational factors

This case study exemplified Reeves et al.'s (2010) framework by demonstrating how factors such as team leadership, hierarchy, and teamwork create happiness, the value of communication, and whether nonverbal communication were essential for teamwork in KSA's ED. This study expanded the framework by providing real-life situations, especially highlighting how physician leadership was key in achieving shared goals and addressing team needs. They both confirmed that effective team leadership involves decision-making abilities, communication skills, defining roles, and recognising team strengths. Further, both the current study and the framework highlighted the benefits of hierarchies in supporting less experienced staff members, which ultimately enhanced interdisciplinary teamwork.

Moreover, the framework highlighted the importance of communication and nonverbal communication and discussed communication barriers such as hierarchy and power struggles. However, as this study found, the framework did not provide comprehensive examples or highlight other communication challenges, such as language barriers. Language barriers were not limited to the specific context of KSA; it is also a worldwide issue that must be considered when exploring factors impacting teamwork (Foronda et al. 2016; Leonard et al. 2004; Al-Turki 2019). Thus, the findings of this study suggest that the framework should be expanded to incorporate linguistic differences, as they had a significant impact on multicultural interdisciplinary teams in the ED.

Furthermore, the current findings and the framework indicated that conflict could arise from differing professional views. However, this study expanded on this by identifying other causes, such as long working hours and stress. As found in this study, understanding these causes can enhance team interactions and patient care.

The current findings added new contributions to the relational factors originally identified by Reeves et al.'s framework (2010), including disputes, harmony and compatibility, and forming relationships, which were not included in this framework.

These new factors showed how interpersonal relationships, such as the opportunities to exchange experiences, manage disputes, and support compatibility among diverse team members, were essential for effective relations among team members in the ED. Interpersonal relationships play a crucial role in effective teamwork in healthcare (West and Chowla 2017; Murphy et al. 2011; Lapierre et al. 2019). Positive relationships among healthcare team members foster trust, better communication, and collaboration, contributing to the team's success (Lapierre et al. 2019). Thus, the findings of this case study suggest that the framework should be expanded to incorporate these valuable relational factors.

9.8.2 Processual Factors

This study aligned with Reeves et al.'s (2010) framework by demonstrating how processual factors such as the physical environment, shift work, communication channels, and unpredictability influenced team working in the ED. In their framework under the "Time and Space" theme, they highlighted how the shared physical space can improve team communication, which was also found in this study. In addition, they noted that fragmented spaces can slow down communication and team interactions, which also aligns with this study's findings. This study found that the distant location of the radiology and laboratory units from the ED separated the team and reduced the pace of the team's interactions.

In addition, this study found that shift work routines influenced performance and well-being, supporting Reeves et al.'s (2010) concern about over-automating routines. Further, communication channels such as intercoms and WhatsApp enabled rapid interaction, supporting and updating Reeves et al. 's (2010) emphasis on using electronic communication during teamworking.

Moreover, this case study and the framework highlighted the need for adaptable teamwork in unpredictable situations. This case study provided practical examples of how unpredictability can support collaboration, knowledge sharing, and skill development in the ED.

However, the framework did not consider factors regarding team-patient interactions, patients' behaviour, and their impact on teamwork in healthcare settings. According to the current study's findings and other studies (Angland et al. 2014; Berlanda et al. 2019), patients' behaviours significantly influence and disturb effective team interactions in healthcare.

Thus, this study added new contributions to the framework by highlighting that violent behaviour, non-urgent cases, and staff-patient communication significantly impact the interdisciplinary team in the ED. The framework could be improved by incorporating the role of patients and their direct impact on the team's interactions.

9.8.3 Organisational Factors

This case study supported and expanded the framework by emphasising the importance of organisational support. It supported the framework by demonstrating how a lack of resources and unresponsive management negatively affected teamwork. This case study added further real-life examples specific to KSA's healthcare system, such as a lack of teamwork training, the consequences of nepotism, collective punishment, and staff shortages. Thus, including these additional examples, the framework's organisational factors can be applied in a variety of healthcare settings, especially in KSA.

9.8.4 Contextual factors

The current findings supported Reeves et al.'s (2010) model, which revealed how cultural and professional diversity affected team dynamics in the ED. While the framework discusses the general benefits and challenges of diversity, this case study added real-world examples, such as salary differences, ethnic divisions, and communication barriers in diverse teams in the ED. These findings emphasised the importance of addressing cultural and power imbalances to enhance effective collaboration in the ED environment.

Furthermore, the findings of gender segregation in the ED of KSA highlighted how cultural norms impacted team interactions. These specific findings are unlike Reeves et al. (2010) claims about the impact of historical and societal patriarchal structures on gender dynamics in healthcare. In their framework, they argue that men typically hold dominant roles and women

tend to be subordinate. Gender segregation in the ED caused some challenges, such as communication barriers and delays in patient care, because of cultural practices such as the separation of genders and specific protocols for male and female staff interactions. While both this study and the framework acknowledged the impact of gender on healthcare teamwork, they highlight different points of the issue. These points highlight the need for policies that address and enhance gender interactions in healthcare.

9.8.5 Individuals' factors

This case study added to the framework by incorporating individual factors not addressed in their work. In the ED, these factors played a significant role in impacting interdisciplinary teamwork. These factors shaped how the ED team worked: emotions, personal experiences, decision-making, multitasking skills, stress management, and the ability to work effectively in fast-paced situations.

As indicated earlier, a separate domain is needed for these factors. The data revealed that team members must adopt and practice these factors to ensure effective interdisciplinary teamwork in the ED. As found in this study, these factors influenced the abilities of team members to cooperate with their colleagues to practice teamwork, which ultimately affected how successfully they functioned in fast-paced environments.

Finally, as discussed in Chapter Two (section 3.5.3.1) in 2017, Reeves and his colleagues updated their concepts of the conceptual framework. However, they did not modify or update the four domains of the original framework. Therefore, this study suggests that the framework could benefit from revisions to include the additional factors identified in this case study, namely disputes, harmony and compatibility, and forming relationships for the relational factors, as well as processual factors like violent behaviour, non-urgent cases, and staff-patient communication. Lastly, the new domain (individuals' factors) and its factors include the emotions of individuals, experience and support, multitasking skills, stress management, and the ability to perform effectively in a fast-paced environment. Although the original framework highlights key factors that impact teamwork, expanding it to include additional factors could make it more comprehensive and adaptable, particularly to culturally diverse contexts such as KSA.

9.9 Limitations of the Study

Despite the research achieving the aim and objectives described in Chapter 1, some limitations were inevitably encountered:

- This study was conducted at a single hospital in the Northern Borders region of KSA. Multiple sites would have offered interesting comparisons. However, the findings may be transferable, even though they are not statistically generalisable.
- The study concentrated on the Saudi context. Expanding the research context to include other countries would reveal additional factors contributing to successful teamwork compared to those discussed in this thesis.
- This study included one field episode. Adopting a longitudinal design would have been beneficial for exploring interdisciplinary team dynamics (Ployhart and Vandenberg 2010; Rekonen 2014). This would have illuminated more factors about interdisciplinary teamwork, but this was not feasible for this thesis because of the limited time scale and resources.
- The impacts of the COVID-19 pandemic on the healthcare system may have influenced the findings since data collection took place (say when in relation to COVID), and the pandemic may have altered the dynamics of collaboration and teamwork. During the pandemic, healthcare systems faced unprecedented pressures, including increased patient loads, resource constraints, and protocol changes worldwide (Hsiang et al. 2020; Leite et al. 2020; Qureshi and AlRajhi 2020). These factors may have influenced participants' experiences and perceptions of teamwork and collaboration, potentially altering the study's findings.
- The specific interview questions used in this study may have affected how participants responded, which may have shaped or limited the findings of interdisciplinary teamwork effectiveness in ED.

9.10 Summary of the Chapter

This chapter contextualised the findings of the current study concerning international literature and, in particular, Reeves et al.'s conceptual framework (2010). Across the four domains discussed in the conceptual framework, a wide range of facilitators and issues that either worked to the departments' advantage or their detriment were identified.

These findings pointed out a valuable opportunity to focus on the cohesion of the team members to obtain quality emergency care and a suitable environment for the ED staff, whether in EDs in KSA or across the globe. This belief in working with an interdisciplinary team underscores the value of collaboration and the benefits of working together. As a result of joining a team, individuals can utilise their diverse skills, knowledge, and perspectives to approach tasks more comprehensively and generate better solutions. This study found that a team approach was required in the ED due to emergencies and crowding, making individual work difficult. It enhanced team skills in ED settings in the KSA and improved service delivery compared to individual work. Employee satisfaction, engagement, productivity, and patient outcomes were all influenced by the quality of teamwork.

Furthermore, the participants agreed that interdisciplinary teamwork in the ED was essential. Practising interdisciplinary teamwork during emergencies significantly improved the level of expertise of the staff, created a happier workplace, and facilitated faster delivery of health services, which was needed in the ED. The team appeared to work effectively, and their interactions increased in higher-level emergencies. The team worked more efficiently and operated within clear roles and hierarchical structure under the direction of a leader. However, the team seemed to encounter challenges and barriers in less critical or urgent situations, such as non-urgent cases.

This study revealed that in the interdisciplinary ED care team, having a strong physician leader was fundamental for optimal patient care and team performance. The leader must possess decision-making skills, clearly state expectations and objectives, and understand team members' abilities to assign tasks. A positive team hierarchy was observed, which facilitated quicker communication and collaboration during peak periods, emergency cases, and in response to patients with multiple symptoms.

In addition, the physical environment of the ED positively impacted communication and coordination among team members. Sharing one nursing station enhanced staff accountability, information sharing, decision-making, role clarification, and efficiency. Further, the design of the ED allowed team members to locate each other faster and provide support.

However, the findings discussed some negative behaviours the participants found to be barriers to the ED team's performance. These included interpersonal issues, conflicts between specialists, and the mood of the team members impeding effective teamwork. These negative

behaviours obstructed the ED teamwork and strongly affected collaboration and patient outcomes. Besides that, the patients' attitudes and those of the people accompanying them directly impacted the team interactions and the quality of the services. The ED must address these factors to foster a cohesive interdisciplinary team.

Moreover, gender segregation revealed how cultural norms influenced team interactions in the ED of KSA. In addition, diversity posed challenges such as wage differences, ethnic divisions, and communication issues, underscoring the need to address these barriers for effective interdisciplinary teamwork. As KSA becomes increasingly multicultural, it must embrace learning other languages, such as English, to eliminate the language barrier. Addressing issues, such as the wage difference between nationals and expats, is also essential to assist in the elimination of discriminatory behaviour.

The study emphasises the value of teamwork skills for effective healthcare service delivery and staff satisfaction. These skills include multitasking, stress management, and the ability to communicate and lead effectively in a fast-paced environment aided by good leadership. The participants highlighted the desire for team members to acquire these skills to avoid poor teamwork under pressure. The study also revealed a gap in ED team skills training in the KSA and suggested a more structured approach to learning these skills. In agreement with these findings, Milton et al. (2022) discussed the importance of teamwork skills in optimising team cohesion and efficient coordination of patients.

This study also found that communication, particularly body language, was crucial in delivering emergency care in the ED. It facilitates faster communication and collaboration among team members, especially during peak times. Body language also served as a tool for staff to communicate more rapidly, particularly when there was a language obstacle. However, staff members should be aware of cultural differences when interpreting nonverbal communication to collaborate effectively. A better understanding of nonverbal communication can improve interactions and expedite services to meet patients' needs earlier. The following chapter will provide the overall contributions and present a comprehensive conclusion to the study.

CHAPTER TEN: Conclusion

10.1 Introduction

This chapter discusses the study's contributions to existing theory and literature, its strengths, recommendations, implications, and the study's conclusion. Finally, it outlines the dissemination plan.

10.2 Contributions of the Study

This study makes contributions to theory and literature. These contributions are discussed below.

10.2.1 Contributions to theory

As discussed in the Discussion Chapter, my study added three key theoretical contributions to the model outlined by Reeves et al. (2010). The first key contribution extends the framework to include individual factors such as the emotions of individuals, experience and support, multitasking skills, stress management, and the ability to perform effectively in fast-paced situations. These skills are essential for effective team dynamics and better patient outcomes in the ED. These findings suggest the need for professional training programmes that help develop these personal abilities, which would improve patient care and teamwork.

In addition, this case study made a second theoretical contribution to relational factors. These factors include disputes, harmony and compatibility, and forming relationships, which were not included in the framework. These additional factors showed how interpersonal relationships contributed to effective team relationships, such as the opportunities to exchange experiences, manage personal disputes, and support compatibility among diverse team members.

The third theoretical contribution was related to the processual factors. While the framework of Reeves et al. (2010) has overlooked these factors, this study demonstrated how patient behaviours, particularly violent behaviour and non-urgent cases, and staff-patient communication significantly influenced team interactions in the ED. For example, violent behaviours disrupted care processes and increased stress, whereas non-urgent cases drained the energy of team members and created delays that impeded critical care for others. As a

result of these findings, the framework needs to incorporate patient-related factors that directly impact ED teamwork.

10.2.2 Contributions to the literature

This study appears to be the first to provide new and in-depth perspectives and experiences of interdisciplinary teamwork in an ED in KSA. This was confirmed by the King Fahad National Library in KSA, which serves as the country's national repository for research and publications. They confirmed this study is original in KSA (See Appendix 13).

The practice of interdisciplinary teamwork and the ways people experience it may differ from culture to culture, and earlier studies have tended to be based on non-Arabic perspectives, which may not be relevant in the context of KSA. Therefore, the findings of the present research study will allow researchers, practitioners and academics to develop a more context-specific understanding of teamwork.

Moreover, the practice of interdisciplinary teamwork in the ED is not well addressed in the literature, especially the barriers, facilitators, and skills related to interdisciplinary teamwork and their impact on team members and the quality of emergency services. As outlined in the Discussion Chapter, this research extends the earlier studies by adding further insight into these aspects and highlighting the importance of interdisciplinary teamwork in ED.

In addition, the current study contributes to the literature by showing how the triage system significantly influenced the effectiveness of interdisciplinary teamwork in the ED. When triage appropriately prioritised urgent cases, the team members could focus their energy and resources on the most critical cases, which enhanced collaboration and communication.

Moreover, during peak times, the team worked effectively together, especially with team leadership. The urgency of the situation and a shared goal helped them coordinate and deliver emergency care effectively. The leader was important in directing tasks and ensuring all members were coordinated, which was essential to meeting the patient’s needs. However, when non-urgent patients were admitted to the ED, it increased workload, drained resources, and caused stress, negatively influencing team interactions and performance. These findings showed a strong relationship between the triage system and the overall effectiveness of interdisciplinary teamwork in the ED. Thus, an effective triage system is essential for ensuring that the ED team can function effectively.

Furthermore, the study's exploration of the relationship between interdisciplinary teamwork and patient care demonstrates teamwork's indispensable role in ensuring optimal healthcare delivery in the ED. The effectiveness of teamwork in the ED was associated with improved patient outcomes, for instance, reduced medical errors, improved treatment coordination, and timely intervention. In addition, the findings revealed that the interdisciplinary teamwork approach was a key enabler in developing their knowledge and experiences while providing emergency care in the ED, which helped them promptly address patients' needs.

10.3 Strengths of the Study

One of the main strengths of this study was the case study methodology, which allowed me to examine team working in the ED from a range of perspectives, obtaining the information from four participant groups (physicians, nurses, allied health professionals, and administrative members) to provide their experiences and perspectives. Each of the four participant groups offered valuable insights. Moreover, the single case study allowed me to analyse the context in which teamwork practices occur. By focusing on several critical factors, such as gender segregation, diversity in the workplace, management support, and the triage system in the ED, I was able to gain a better understanding of multiple relevant factors. Furthermore, it provided an in-depth analysis of patient behaviour and family dynamics and how they impact teamwork. It provided valuable insights into the ED's complex environment, identifying areas for improvement and best practices for managing teamwork in high-stress environments.

The other strength of the study was my ability to conduct the interviews, observations, document review, and transcription and translation. Being a novice researcher, conducting these critical research processes allowed me to acquire meaning from the collected data.

A further strength of this study was the triangulation method (Lincoln and Guba 1985; Wilson 2014; Flick 2018), which involved the use of multiple methods of data collection (semi-structured in-depth interviews, non-participant observation, and document review). Multiple data collection methods enabled new insights that a single collection method cannot reveal. For instance, data from non-participant observations shed more light on teamwork practices, such as how the team members interact and communicate with each other. Also, reviewing the documents helped to know that the hospital management is aware of the importance of teamwork and recommends following Saudi culture while interacting with each other. It also identified how limited guidance and training was in terms of teamwork.

10.4 Recommendations

- A crucial recommendation arising from this study is that teamwork training must be implemented, which is an imperative part of the ED orientation and professional development agendas. To ensure cohesive teamwork across all professions in ED, teamwork training and guidance or policies must be interdisciplinary.
- It would be prudent for the Saudi MOH to review the salary discrepancy among the multicultural workforces. This may reduce resignations among staff members, which would reduce staff shortages.
- Education initiatives promoting cultural awareness among multicultural staff are necessary to address culture-related challenges.
- The presence of professional translators in the ED to provide effective communication is crucial. Accordingly, this study recommends the utilisation of well-trained translators who could employ their skills in Arabic and a foreign language, such as English, to provide professional services to the ED staff and patients. This could suppTort competent communication and ensure high-quality healthcare. It is also crucial for translators to have an in-depth understanding of various cultures, including Saudi culture, to facilitate and speed up the transfer of information.
- There must be strict security guards to prevent violence and ensure a safe environment in the ED. This, in turn, would provide safety for employees and promote the delivery of health services in the ED.

10.5 Implications

- The study highlights the importance of better understanding emergency staff attitudes and perceptions of teamwork. Understanding this concept can serve as a basis for improving teamwork practices in emergency healthcare settings. Healthcare organisations are responsible for investing in initiatives promoting effective ED teamwork. This responsibility includes providing training, guidance, and policies for teamwork. By concentrating on training, the ED service providers can boost teamwork effectiveness and enhance the delivery of emergency care.
- The study emphasises the need for the management of the ED to adopt a culture of continuous improvement and evaluation of teamwork practices in the ED. A regular

assessment and feedback mechanism must be incorporated to monitor the effectiveness of teamwork interventions, identify opportunities for improvement, and address any barriers or challenges. The continuous evaluation would allow for the refinement and adaptation of teamwork strategies to meet the requirements of the ED context. By fostering a culture of constant learning and improvement, the management of the ED can ensure that teamwork practices evolve and remain aligned with the dynamic nature of emergency care.

10.6 Conclusion of the Study

The study provided insights into interdisciplinary teamwork practices from the perspectives and experiences of staff when they interacted with each other in the admission areas in the ED of a public hospital in the Northern Borders region of KSA. This study demonstrated that organised, effective teamwork in the ED had considerable benefits for patient safety, quality of care, staff satisfaction, and patient satisfaction.

The current study aligned with other research (Carter et al. 2017; Aase et al. 2014; Alyami 2021), showing that understanding the context is inseparable from understanding teamwork. Thus, using a qualitative case study helped to provide in-depth about how contextual factors discussed earlier influenced interdisciplinary teamwork in KSA.

Moreover, using Reeves et al.'s (2010) framework in this study provided a theoretical structure for interpreting and comparing the findings. This case study offered real-life examples of how the framework's factors impacted the practice of teamwork in the ED. Using the real-life data of the KSA's ED, the study provided a deeper understanding of interdisciplinary teamwork and suggested modifications for the framework.

Furthermore, while the KSA Vision 2030 aims to promote gender collaboration, improve access and reduce the waiting times for emergency care, and provide training opportunities to the healthcare workforce, the current study provided valuable contributions to this Vision by identifying key areas that need improvement. Further, the factors identified in this study provided a valuable guide for policymakers and healthcare administrators in KSA. Thus, they can enhance the healthcare system by improving and addressing these factors. Consequently, the EDs will operate more efficiently and support long-term sustainability and improvement of healthcare in the country, which aligns with the government's vision.

Finally, my initial expectations were different from what I learned from this research. In particular, I learned about the concepts and how essential interdisciplinary teamwork is in the ED, what barriers team members have to overcome, the facilitators they need, and what skills they need to develop to practice teamwork. Hopefully, the findings of this research study will make a difference to team members and patients in the ED by improving the practice of interdisciplinary teamwork, which will be reflected in the overall healthcare outcomes.

10.7 Dissemination Plan

The findings of this research must be widely disseminated, including across Cardiff University, the Saudi MOH, and international and national conferences via conference papers and participation.

References

Aase, I., Hansen, B.S. and Aase, K. 2014. Norwegian nursing and medical students' perception of interprofessional teamwork: a qualitative study. *BMC Medical Education* 14, pp. 1–9. doi: 10.1186/1472-6920-14-170

Abdul Latif Jameel. 2018, January 31. *A changing future: The economic role of women in Saudi Arabia.* Available at: https://alj.com/en/perspective/changing-future-economic-role-women-saudi-arabia/ [Accessed: 18 May 2023].

Aboshaiqah, A. 2016. Strategies to address the nursing shortage in Saudi Arabia. *International Nursing Review* 63(3), pp. 499–506. doi:10.1111/inr.12271

Abu Alsuood, Y. and Youde, A. 2018. An exploration of cultural factors and their influence on Saudi Arabian university deans' leadership perceptions and practices. *Education Sciences* 8(2). doi:10.3390/educsci8020057

Adamis, D., Krompa, G.M., Rauf, A., Mulligan, O. and O'Mahony, E. 2023. Belbin's Team Role Balance and Team Effectiveness in Community Mental Health Teams in an Area of Northwest Ireland: Implications for Leadership. *Merits* 3(3), pp. 604–614.

Adams, A., Hollingsworth, A. and Osman, A. 2019. The implementation of a cultural change toolkit to reduce nursing burnout and mitigate nurse turnover in the emergency department. *Journal of Emergency Nursing* 45(4), pp. 452–456. doi: 10.1016/j.jen.2019.03.004

Adams, J.S. 1963. Towards an understanding of inequity. *The Journal of Abnormal and Social Psychology* 67(5), pp. 422-436. doi:10.1037/h0040968

Adriaenssens, J., De Gucht, V., Van Der Doef, M. and Maes, S. 2011. Exploring the burden of emergency care: predictors of stress-health outcomes in emergency nurses. *Journal of Advanced Nursing* 67(6), pp. 1317–1328. doi:10.1111/j.1365-2648.2010.05599.x

Agency for Healthcare Research and Quality 2017. *Daily Huddle Component Kit*. Available at: https://www.ahrq.gov/hai/tools/ambulatory-surgery/sections/sustainability/management/huddles-comp-kit.html.[Accessed: 8 March 2023].

Agency for Healthcare Research and Quality 2019. *Teamwork Training*. Available at: https://psnet.ahrq.gov/primer/teamwork-training [Accessed: 10 January 2023].

Aghasian, E., Sim, A.T.H. and Hee, J.M. 2015. A pre-hospital emergency response framework for better work coordination. *ARPN Journal of Engineering and Applied Sciences* 10(23), pp. 17740–17748.

Ahmed, M. 2017. *Saudi Arabia Looks To The Private Sector To Meet Growing Healthcare Demands*. Available at: https://www.forbesmiddleeast.com/saudi-arabia-looks-to-the-private-sector-to-meet-growing-healthcare-demands [Accessed: 5 December 2019].

AHRQ 2013. *Team Strategies & Tools to Enhance Performance and Patient Safety*. Available at:

https://www.ahrq.gov/teamstepps/instructor/essentials/pocketguide.html#leadership [Accessed: 4 March 2024].

AHRQ 2018. *TeamSTEPPS® 2.0 Pocket Guide Team strategies & tools to enhance performance and patient safety*. Available at: https://www.ahrq.gov/teamstepps/instructor/essentials/pocketguide.html [Accessed: 28 February 2024].

Aitken, G. 2019. Medical students as certified interpreters. *AMA Journal of Ethics* 21(3), pp. 232–238. doi: 10.1001/amajethics.2019.232 Ajeigbe, D.O. 2012. *Nurse-Physician Teamwork in the Emergency Department*. Los Angeles: University of California,

Ajeigbe, D.O. McNeese-Smith, D., Leach, Searle, L. and Phillips, L. 2013. Nurse-physician teamwork in the emergency department: Impact on perceptions of job environment, autonomy, and control over practice. *The Journal of Nursing Administration* 43(3), pp. 142–148. doi: 10.1097/NNA.0b013e318283dc23

Ajeigbe, D.O., McNeese-Smith, D., Phillips, L.R. and Leach, L.S. 2014. Effect of nurse-physician teamwork in the emergency department nurse and physician perception of job satisfaction. *Journal of Nursing & Care* 3(1), pp.142-148. doi: 10.1097/NNA.0b013e318283dc23

Akobeng, A.K. 2005. Principles of evidence based medicine. *Archives of Disease in Childhood* 90(8), pp. 837–840. doi:10.1136/adc.2005.071761

Al Abdullah, F.A.M et al. 2023. The impact of interdisciplinary collaboration on patient care in pharmacy, administration, psychology, radiology, and nursing. *Saudi Journal of Medical and Pharmaceutical Sci*ences 9(12), pp. 780–785. doi: 10.36348/sjmps.2023.v09i12.001

Al-Araidah, O., Al Theeb, A., Badar, M. and Mandahawi, N. 2018. A study of deficiencies in teamwork skills among Jordan caregivers. *International Journal of Health Care Quality Assurance* 31(4), pp. 350–360. doi: 10.1108/IJHCQA-11-2016-0175

Al Khathaami, A.M., Mohammad, Y.O., Albrahim, S.A. and Jradi, H.A. 2018. Factors associated with late arrival of acute stroke patients to emergency department in Saudi Arabia. *SAGE Open Medicine* 6. doi: 10.1177/2050312118776719.

Alilyyani, B., Wong, C.A. and Cummings, G. 2018. Antecedents, mediators, and outcomes of authentic leadership in healthcare: A systematic review. *International Journal of Nursing Studies* 83, pp. 34-64. doi: 10.1016/j.ijnurstu.2018.04.001

Al Mutairi, M. et al. 2016. Emergency medical service system in the Kingdom of Saudi Arabia. *Journal of Medical Science and Clinical Research* 4(10), pp. 13084–13092. doi: 10.1186/s12245-019-0232-0

Al Otaibi, M.J. et al. 2022. Collaborative care models: Enhancing patient safety through interdisciplinary teams. *Journal of Namibian Studies: History Politics Culture* 32, pp. 946–956. doi: 10.59670/am9eyk26

Al Owad, A., Samaranayake, P., Karim, A. and Ahsan, K. B. 2018. An integrated lean methodology for improving patient flow in an emergency department – Case study of a Saudi Arabian hospital. *Production Planning & Control* 29(13), pp. 1058–1081. doi: 10.1080/09537287.2018.1511870

Al Sabei, S.D., Labraguem L.J., Al-Rawajfah, O., AbuAlRub R., Burney, I.A. and Jayapal, S.K. 2022. Relationship between interprofessional teamwork and nurses' intent to leave work: The mediating role of job satisfaction and burnout. *Nursing Forum* 57(4), pp. 568–576. doi: 10.1111/nuf.12706

Alanazi, M.K.E. et al. 2022. Investigating the influence of interdisciplinary teamwork and professional development on patient outcomes and job satisfaction among nurses, health administrators, and emergency medical service technicians in Saudi Arabia. *Chelonian Research Foundation* 17(2), pp. 4419–4428. doi: 10.18011/2022.04(1) 4419-4428

Alanzi, T.M. et al. 2022. Evaluation of the Mawid mobile healthcare application in delivering services during the COVID-19 pandemic in Saudi Arabia. *International Health* 14(2), pp. 142–151. doi: 10.1093/inthealth/ihab018

Alasiri, S.F. and Kalliecharan, R. 2019. Strengthening nurses' clinical leadership in Saudi hospitals. *Journal of Nursing and Health Science (IOSR-JNHS)* 8(1), pp. 55–64. doi: 10.9790/1959-0801095564

Alatawi, A.D., Niessen, L.W., Bhardwaj, M., Alhassan, Y. and Kahn, J.A.M. 2022. Factors influencing the efficiency of public hospitals in Saudi Arabia: A qualitative study exploring stakeholders' perspectives and suggestions for improvement. *Frontiers in Public Health* 10, pp. 1-12. doi: 10.3389/fpubh.2022.922597

Albalahi, N.M. Al Bargawi, M. and Kofi, M. 2021. Awareness and utilization of urgent care services among patients attending Al-Wazarat PHCC in Riyadh, Saudi Arabia 2020. *Journal of Family Medicine and Primary Care* 10(12), pp. 4452-4462. doi: 10.4103/jfmpc.jfmpc_1007_21

Albelali, S. 2020. *Female labour in Saudi Arabia under the Nitaqat Programme: A gendered power relations approach*. PhD Thesis, University of Portsmouth.

Albougami, A. 2015. Role of language and communication in providing quality healthcare by expatriate nurses in Saudi Arabia. *Journal of Health Specialties* 3(3), pp. 166–172.

Albreem, M.A., Sheik, A.M., Bashir, M.J.K. and El-Saleh, A.A. 2023. Towards green Internet of Things (IoT) for a sustainable future in Gulf Cooperation Council countries: Current practices, challenges and future prospective. *Wireless Networks* 29(2), pp. 539–567. doi:10.1007/s11276-022-03133-3

Albrithen, A. and Yalli, N. 2015. Medical social workers' perceptions related to interprofessional teamwork at hospitals. *Journal of Social Service Research* 41(5), pp. 722–731. doi: 10.1080/01488376.2015.1068723

Aldeen, A.Z. 2007. *Commentary:* The Muslim ethical tradition and emergent medical care: An uneasy fit. *Academic Emergency Medicine* 14(3), pp. 277–278. doi: 10.1197/j.aem.2006.10.004

Aldera, A.S. 2017. Teaching EFL in Saudi Arabian context: Textbooks and culture. *Journal of Language Teaching and Research* 8(2), pp. 221-228. doi: 10.17507/jltr.0802.03

Alderson, J.C. 2009. Air safety, language assessment policy, and policy implementation: The case of aviation English. *Annual Review of Applied Linguistics* 29, pp. 168–187. doi:10.1017/S0267190509090138

Aldossari, M. and Calvard, T. 2021. The politics and ethics of resistance, feminism and gender equality in Saudi Arabian organizations. *Journal of Business Ethics* 181, pp. 873-890. doi:10.1007/s10551-021-04949-3

Alfahmi, M.Z. 2022. Patients' preference approach to overcome the moral implications of family-centred decisions in Saudi medical settings. *BMC Medical Ethics* 23(1). doi: 10.1186/s12910-022-00868-8

Alfaqeeh, G.A. 2015. *Access and utilisation of primary health care services in Riyadh Province, Kingdom of Saudi Arabia*. PhD dissertation, University of Bedfordshire.

Alghamdi, M.S., Beach, T.H. and Rezgui, Y. 2022. Reviewing the effects of deploying building information modelling (BIM) on the adoption of sustainable design in Gulf countries: A case study in Saudi Arabia. *City, Territory and Architecture* 9, pp. 1–17. doi: 10.1186/s40410-022-00160-7

Al-Hanawi, M.K., Khan, S.A. and Al-Borie, H.M 2019. Healthcare human resource development in Saudi Arabia: Emerging challenges and opportunities—A critical review. *Public Health Reviews* 40(1). doi: 10.1186/s40985-019-0112-4

Alharahsheh, H.H. and Pius, A. 2020. A review of key paradigms: Positivism VS interpretivism. *Global Academic Journal of Humanities and Social Sciences* 2(3), pp. 39–43. doi: 10.36348/gajhss.2020.v02i03.001

Alharbi, A.A. et al. 2023. The pattern of emergency department length of stay in Saudi Arabia: an epidemiological nationwide analyses of secondary surveillance data. *Frontiers in Public Health* 11. doi: 10.3389/fpubh.2023.1265707

Alharbi, A.M. et al. 2022. Accountable care organization: Is it early approach in Saudi Arabia? *American Journal of Industrial and Business Management* 12(11). doi: 10.4236/ajibm.2022.1211094

Alharbi, N.S. et al. 2022. COVID-19 mobile apps in Saudi Arabia: systematic identification, evaluation, and features assessment. *Frontiers in Public Health* 10, p. 803677. doi: 10.3389/fpubh.2022.803677

doi: Alhazmi, A. and Nyland, B. 2015. Contextualization of Saudi international students' experience in facing the challenge of moving to mixed gender environments. *American International Journal of Contemporary Research* 5(2), pp. 87–97.

Aljohani, B., Burkholder, J., Tran, Q.K. Chen, C., Beisenova, K. and Pourmand, A. 2021. Workplace violence in the emergency department: a systematic review and meta-analysis. *Public Health* 196, pp. 186–197. doi: 10.1016/j.puhe.2021.02.009

Al-Kahtani, N.K., Aljabri, D., Alrawiai, S., Alsubaie, S., Alasmari, M., Aldukhi, Z. and Alkahtani, H. K. 2022. Factors affecting utilization of the e-health "Seha" interactive application for online medical consultation in Saudi Arabia. *Risk Management and Healthcare Policy* 15, pp. 1607–1619. doi: 10.2147/RMHP.S349548

Alkhaqani, A.L. 2022. Importance of teamwork communication in nursing practice. *Nursing Communications* 6, pp. 1–2. doi: 10.53388/IN2022015

Almalki, M., Fitzgerald, G. and Clark, M. 2011. Health care system in Saudi Arabia: An overview. *Eastern Mediterranean Health Journal* 17(10). pp. 784-793. doi: 10.26719/2011.17.10.7 Almost, J., Wolff, A.C. and Stewart-Pyne, A. 2016. Managing and mitigating conflict in healthcare teams: an integrative review. *Journal of Advanced Nursing* 72(7), pp. 1490–1505. doi: 10.1111/jan.12903

Almulhim, N. et al. 2021. Preference for visiting emergency department over primary health care center among population in Saudi Arabia. *Cureus* 13(12), e20073. doi: 10.7759%2Fcureus.20073

Almutairi, A. and McCarthy, A.L. 2012. A multicultural nursing workforce and cultural perspectives in Saudi Arabia: An overview. *TheHealth* 3(3), pp. 71–74.

Al-Nami, A.Q. and Khan, L.A. 2023. Physician's leadership role in healthcare transformation–Challenges and opportunities. *Saudi Journal of Medicine* 8(9), pp. 547–549. doi: 10.1177/10398562231169128Alnasser, S., Alharbi, M., Alibrahim, A., Aal ibrahim, A., Kentab, O., Alassaf, W. and Aljahany, M. 2023. Analysis of emergency department use by non-urgent patients and their visit characteristics at an academic center. *International Journal of General Medicine* 16, pp. 221–232. doi: 10.2147/IJGM.S391126

AlOmar, R.S., AlShamlan, N.A and Al Shammari , M.A. 2021. Perceived barriers to primary care services utilization and its associations with overall satisfaction of patients in Saudi Arabia: A cross-sectional questionnaire-based study. *Journal of Primary Care & Community Health* 12, doi: 10.1177/21501327211014065

Alotaibi, J., Paliadelis, P.S. and Valenzuela., F-R. 2016. Factors that affect the job satisfaction of Saudi Arabian nurses. *Journal of Nursing Management* 24(3), pp. 275–282. doi: 10.1111/jonm.12327

Alqufly, A.E., Alharbi, B.M., Alhatlany, K.K. and Alhajjaj, F.S. 2019. Muslim female gender preference in delaying the medical care at emergency department in Qassim Region, Saudi Arabia. *Journal of Family Medicine and Primary Care* 8(5), pp. 1658–1663. doi:10.4103/jfmpc.jfmpc_141_19

Alrabeah, A.H., Ogden, S., Edgar, D. and Fryer, K. 2020. Total Quality Management and hospital workforce national cultural diversity in Saudi Arabia: Help or hindrance? *International Journal of Research in Business Studies and Management* 7(5), pp. 18–30.

Alrasheed, M.M., Alhawassi, T. M., Alanazi, A., Aloudah, N., Khurshid, F. and Alsultan, M. 2018. Knowledge and willingness of physicians about deprescribing among older patients: a qualitative study. *Clinical Interventions in Aging* 13, pp. 1401-1408. doi: 10.2147/CIA.S165588

Alsabri, M. et al. 2020. Impact of teamwork and communication training interventions on safety culture and patient safety in emergency departments: A systematic review. *Journal of Patient Safety* 18(1), pp. e351-e361. doi: 10.1097/PTS.0000000000000782

Alsadaan, N., Jones, L.K., Kimpton, A. and DaCosta, C. 2021. Challenges facing the nursing profession in Saudi Arabia: An integrative review. *Nursing Reports* 11(2), pp. 395–403. doi:10.3390/nursrep11020038

Alsalmi, M. and Alilyyani, B. 2023. The role of authentic leadership in nurses' stress and burnout in emergency departments. *Leadership in Health Services* 37(1), pp. 147–158. doi:10.1108/LHS-01-2023-0005

Alsallum, F.S., Banakhar, M.A., Gattan, S.K., Alwalani, S., Alsuhaim, R. A. and Samarkandi, R. A. 2019. Nurses' and physicians' attitudes towards nurse-physician collaboration in critical care. *Global Journal of Health Science* 12(1), p. 149. doi: 10.5539/gjhs.v12n1p149

Al-Shahri, M.Z. 2002. Culturally sensitive caring for Saudi patients. *Journal of Transcultural Nursing* 13(2), pp. 133–138. doi: 10.1177/104365960201300206

AlShammari, T., Jennings, P. and Williams, B. 2017. Evolution of emergency medical services in Saudi Arabia. *Journal of Emergency Medicine, Trauma and Acute Care* 2017(1). doi: 10.5339/jemtac.2017.4

Alshareef, A.G., Wraith, D., Dingle, K. and Mays, J. 2020. Identifying the factors influencing Saudi Arabian nurses' turnover. *Journal of Nursing Management* 28(5), pp. 1030–1040. doi: 10.1111/jonm.13028

Al-Shehri, B. 2022. *Communication and information exchange between Emergency Medical Teams during emergency situations in Riyadh, the Kingdom of Saudi Arabia: An explorative qualitative study.* PhD thesis, Queen's University Belfast.

Alshehri, F.A. 2017. *Workplace violence against nurses working in emergency departments in Saudi Arabia: a cross-sectional study*. PhD Dissertation, The University of Adelaide.

Al-Shrobya, W.A.A., Sohaibania, I.S., Bin Dayela, M.E., Al-Sulimanc, N.S. Alhumaid, N.S. and Alhraiwile, N.J. 2024. *Impact of telephone medical consultation service (937) on users outcomes in Saudi Arabia: A national study*. Available at: https://karger.com/sjh/article-pdf/doi/10.1159/000537991/4182333/000537991.pdf [Accessed: 4 May 2024].

Alshuwaikhat, H. and Mohammed, I. 2017. Sustainability matters in national development visions—Evidence from Saudi Arabia's Vision for 2030. *Sustainability* 9(3)

Al-Turki, R.A. 2019. *Effective collaborative working between nurses in a multicultural setting in Saudi Arabia: Barriers and solutions*. PhD. dissertation, University of Salford (United Kingdom).

Alyaemni, A. and Alhudaithi, H. 2016. Workplace violence against nurses in the emergency departments of three hospitals in Riyadh, Saudi Arabia: A cross-sectional survey. *NursingPlus Open* 2, pp. 35–41. doi: 10.1016/j.npls.2016.09.001

Alyami, R.M.H. 2021. *The nature and structure of teams: A case study of interdisciplinary teamworking in primary care*. PhD Thesis, University of Leeds.

Alyasin, A. and Douglas, C. 2014. Reasons for non-urgent presentations to the emergency department in Saudi Arabia. *International Emergency Nursing* 22(4), pp. 220–225. doi: 10.1016/j.ienj.2014.03.001

Alzahrani, N., Jones, R. and Abdel-Latif, M.E. 2018. Attitudes of doctors and nurses toward patient safety within emergency departments of two Saudi Arabian hospitals. *BMC Health Services Research* 18(1).doi: 10.1186/s12913-018-3542-7

Anderson, C. and Brown, C.E. 2010. The functions and dysfunctions of hierarchy. *Research in Organizational Behavior* 30, pp. 55–89.doi: 10.1016/j.riob.2010.08.002

Anderson, J.E., Lavelle, M. and Reedy, G. 2021. Understanding adaptive teamwork in health care: Progress and future directions. *Journal of Health Services Research & Policy* 26(3), pp. 208–214. doi: 10.1177/1355819620978436

Andrade, C. 2021. The inconvenient truth about convenience and purposive samples. *Indian Journal of Psychological Medicine* 43(1), pp. 86–88. doi: 10.1177/ 0253717620977000

Andriyani, S.H., Setyorini, F.A., Dewi, E. and Pratiwi, A. 2019. Nurse' knowledge and their performance on cardiopulmonary resuscitation (CPR) in critical and emergency care unit. *IJNP (Indonesian Journal of Nursing Practices)* 3(1), pp. 52–57. doi: 10.18196/ijnp.3193

Angland, S., Dowling, M. and Casey, D. 2014. Nurses' perceptions of the factors which cause violence and aggression in the emergency department: A qualitative study. *International Emergency Nursing* 22(3), pp. 134–139. doi: 10.1016/j.ienj.2013.09.005

Anney, V.N. 2014. Ensuring the quality of the findings of qualitative research: Looking at trustworthiness criteria. *Journal of Emerging Trends in Educational Research and Policy Studies* 5(2), pp. 272–281.

Antwi, S.K. and Hamza, K. 2015. Qualitative and quantitative research paradigms in business research: A philosophical reflection. *European Journal of Business and Management* 7(3), pp. 217–225.

Apker, J., Mallak, L. and Gibson, S.A. 2007. Communicating in the "gray zone": perceptions about emergency physician–hospitalist handoffs and patient safety. *Academic Emergency Medicine* 14(10), pp. 884–894. doi: 10.1197/j.aem.2007.06.037

Aquino, J.F. Riss, R.R., Multerer, S.M., Mogilner, L.N. and Turner, T.L. 2022. A step-by-step guide for mentors to facilitate team building and communication in virtual teams. *Medical Education Online* 27(1). doi: 10.1080/10872981.2022.2094529

Arenal Gota, T. and Belzunegui Otano, T. 2017. Justificación bibliográfica del análisis de riesgos para los profesionales sanitarios en ambulancias de urgencia [Bibliographic justification of risk analysis for health professionals in emergency ambulances]. *Revista Enfermería del Trabajo* 7(2)*,* pp. 41-48.

Arifin, S.R.M. 2018. Ethical considerations in qualitative study. *International Journal of Care Scholars* 1(2), pp. 30–33. doi: 10.31436/ijcs.v1i2.82

Arksey, H. and O'Malley, L. 2005. Scoping studies: Towards a methodological framework. *International Journal of Social Research Methodology* 8(1), pp. 19–32. doi: 10.1080/1364557032000119616

Armstrong, R., Hall, B.J., Doyle, J. and Waters, E. 2011. 'Scoping the scope' of a Cochrane review. *Journal of Public Health* 33(1), pp. 147–150. doi: 10.1093/pubmed/fdr015

Ashton, R.A., Morris, L. and Smith, I. 2018. A qualitative meta-synthesis of emergency department staff experiences of violence and aggression. *International Emergency Nursing* 39, pp. 13–19. doi: 10.1016/j.ienj.2017.12.004

Asmri, M.A., Almalki, M. J., Fitzgerald, G. and Clark, M. 2020. The public health care system and primary care services in Saudi Arabia: A system in transition. *Eastern Mediterranean Health Journal* 26(4), pp. 468–476. doi: 10.26719/emhj.19.049

Assaf, G.N., Holroyd, E. and Lopez, V. 2017. Isolation and prayer as means of solace for Arab women with breast cancer: An in-depth interview study. *Psycho-Oncology* 26(11), pp. 1888–1893. doi: 10.1002/pon.4402

Assbeihat, J.M. 2016. The impact of collaboration among members on team's performance. *Management and Administrative Sciences Review* 5(5), pp. 248–259.

Augenstein, T., Schneider, A., Wehler, M. and Weigl, M. 2021. Multitasking behaviors and provider outcomes in emergency department physicians: Two consecutive, observational and multi-source studies. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 29 (14), pp. 1–9. doi: 10.1186/s13049-020-00824-8

Aveling, E. L., Stone, J. Sundt, T., Wright, C., Gino, F. and Singer, S. 2018. Factors influencing team behaviors in surgery: A qualitative study to inform teamwork interventions. *The Annals of Thoracic Surgery* 106(1), pp. 115–120. doi: 10.1016/ j.athoracsur.2017.12.045

Avery, A., Cresswell, K., Crowe, S., Huby, G., Robertson, A. and Sheikh, A. 2011. The case study approach. *BMC Medical Research Methodology*, 11, pp. 100-108doi: 10.1186/1471-2288-11-100

Azevedo, B.D.S., Nery, A.A. and Cardoso, J. P. 2017. Occupational stress and dissatisfaction with quality of work life in nursing. *Texto & Contexto-Enfermagem* 26, e3940015. doi: 10.1590/0104-07072017003940015

Baddar, F., Salem, O.A. and Villagarcia, H.N. 2016. Conflict resolution strategies of nurses in a selected government tertiary hospital in the Kingdom of Saudi Arabia. *Journal of Nursing Education and Practice* 6(5), pp. 91–99. doi: 10.5430/jnep.v6n5p91

Bafarasat, A.Z. and Oliveira, E. 2021. Prospects of a transition to the knowledge economy in Saudi Arabia and Qatar: A critical reflection through the lens of spatial embeddedness and evolutionary governance theory. *Futures* 129. doi: 10.1016/ j.futures.2021.102731

Baiden, B.K. and Price, A.D. 2011. The effect of integration on project delivery team effectiveness. *International Journal of Project Management* 29(2), pp. 129–136. doi: 10.1016/j.ijproman.2010.01.016

Bakker, A.B. and Oerlemans, W.G. 2016. Momentary work happiness as a function of enduring burnout and work engagement. *The Journal of Psychology* 150(6), pp. 755–778. doi: 10.1080/00223980.2016.1182888

Barke, H. and Prechelt, L. 2019. Role clarity deficiencies can wreck agile teams. *PeerJ Computer Science* 5, e241. doi: 10.7717/peerj-cs.241

Basahal, A., Forde, C. and MacKenzie, R. 2023. Labour market localisation policies and organizational responses: an analysis of the aims and effects of the Saudi Nitaqat reforms. *International Journal of Organizational Analysis* 31(4), pp. 1024–1036. doi: 10.1108/IJOA-03-2021-2681

Bass, B.M. 1990. From transactional to transformational leadership: Learning to share the vision. *Organizational Dynamics* 18(3), pp. 19–31. doi: 10.1016/0090-2616(90)90061-S

Baxter, P. and Jack, S. 2008. Qualitative case study methodology: Study design and implementation for novice researchers. *The Qualitative Report* 13(4), pp. 544–559. doi: 10.46743/2160-3715/2008.1573

Baxter, S.K. and Brumfitt, S.M. 2008. Benefits and losses: a qualitative study exploring healthcare staff perceptions of teamworking. *BMJ Quality & Safety* 17(2), pp. 127–130. doi: 10.1136/qshc.2007.022277

BBC. 2015. *Saudi Arabia's women vote in election for first time*. Available at: https://www.bbc.co.uk/news/world-middle-east-35075702 [Accessed: 18 May 2023].

BBC. 2018. *Saudi Arabia's ban on women driving officially ends.* Available at: https://www.bbc.co.uk/news/world-middle-east-44576795 [Accessed: 18 May 2023].

Bearman, C., Hayes, P. and Thomason, M. 2023. Facilitating teamwork in emergency management: The team process checklist. *International Journal of Disaster Risk Reduction* 97. doi: 10.1016/j.ijdrr.2023.103979

Bekkink, M.O., Farrell, S.E. and Takayesu, J.K. 2018. Interprofessional communication in the emergency department: residents' perceptions and implications for medical education. *International Journal of Medical Education* 9, pp. 262-270. doi: 10.5116%2Fijme.5bb5.c111

Belbin, M. 2012. *The Nine Belbin Team Roles*. Available at: https://www.belbin.com/about/belbin-team-roles [Accessed: 18 January 2023].

Belbin, M. 2015. *Team Roles in a Nutshell.* Available at: https://www.belbin.com/media/1336/belbin-for-students.pdf [Accessed: 21 February 2023].

Berber, N., Agneš Slavić, A. and Aleksić, M. 2020. Relationship between perceived teamwork effectiveness and team performance in banking sector of Serbia. *Sustainability* 12(20). doi: 10.3390/su12208753

Berlanda, S. et al. 2019. Addressing risks of violence against healthcare staff in emergency departments: the effects of job satisfaction and attachment style. *BioMed Research International* 2019. doi: 10.1155/2019/5430870

Bernstein, S.L. and Asplin, B.R. 2006. Emergency department crowding: old problem, new solutions. *Emergency Medicine Clinics* 24(4), pp. 821–837. doi: 10.1016/ j.emc.2006.06.013

Bhanja, A., Hayirli, T., Stark, N., Hardy, J., Peabody, C.R. and Kerrissey, M. 2022. Team and leadership factors and their relationship to burnout in emergency medicine during COVID-19: A 3-wave cross-sectional study. *Journal of the American College of Emergency Physicians Open* 3(4), e12761. doi: 10.1002/emp2.12761

Bijani, M., Abedi, A., Karimi, S. and Tehranineshat, B. 2021. Major challenges and barriers in clinical decision-making as perceived by emergency medical services personnel: A qualitative content analysis. *BMC Emergency Medicine* 21(11), pp. 1–12. doi: 10.1186/s12873-021-00408-4

Bindayel, M.A. 2022. *Innovation leadership and employee behaviours in nurse recruitment in Saudi Arabian hospitals: A qualitative study.* PhD Thesis, Cardiff University.

Bingham, A.J. 2023. From data management to actionable findings: A five-phase process of qualitative data analysis. *International Journal of Qualitative Methods* 22, p. 16094069231183620. doi: 10.1177/16094069231183620.

Bogdan, R. and Biklen, S.K. 1997. *Qualitative Research for Education*. Allyn & Bacon Boston, MA.

Boiko, O., Edwards, M., Zschaler, S., Miles, S. and Rafferty, A. M. 2021. Interprofessional barriers in patient flow management: an interview study of the views of emergency department staff involved in patient admissions. *Journal of Interprofessional Care* 35(3), pp. 334–342. doi: 10.1080/13561820.2020.1760223

Boin, A. et al. 2016. *The Politics of Crisis Management: Public Leadership Under Pressure*. Cambridge University Press.

Boin, A., Hart, P. and Kuipers, S. 2018. The crisis approach. In: Rodríguez, H., Donner, W. and Trainor, J. eds. *Handbook of Disaster Research*. Handbooks of Sociology and Social Research. Cham: Springer International Publishing, pp. 23–38.

Boivin, D.B. and Boudreau, P. 2014. Impacts of shift work on sleep and circadian rhythms. *Pathologie Biologie* 62(5), pp. 292–301. doi: 10.1016/j.patbio.2014.08.001

Bonebright, D.A. 2010. 40 years of storming: A historical review of Tuckman's model of small group development. *Human Resource Development International* 13(1), pp. 111–120. doi: 10.1080/13678861003589099

Boodhoo, R. and Purmessur, R.D. 2009. Justifications for qualitative research in organisations: A step forward. *The Journal of Online Education (New York)*.

Boone, A., Boone, A., Roelants, M., Hoppenbrouwers, K., Vandermeulen, C., Du Bois, M. and Godderis, L. 2022. Perceived team roles of medical students: A five year cross-sectional study. *BMC Medical Education* 22(1). doi: 10.1186/s12909-022-03263-4

Boren, S.A. and Moxley, D. 2015. Systematically reviewing the literature: building the evidence for health care quality. *Missouri Medicine* 112(1), pp. 58-62.

Boucher, N. A., Siddiqui, E. A. and Koenig, H. G. 2017) Supporting Muslim Patients During Advanced Illness. *The Permanente Journal* 21, pp, 16–190.doi: 10.7812/TPP/16-190 Bowen, G.A. 2009. Document analysis as a qualitative research method. *Qualitative Research Journal* 9(2), p. 27-40. doi: 10.3316/QRJ0902027

Bowling, A. 2014. *Research Methods in Health: Investigating Health and Health Services*. McGraw-Hill Education (UK).

Boyle, A., Higginson, I., Sarsfield, K. and Kumari, P. *RCEM Acute Insight Series: Crowding and its Consequences*. Available at: https://rcem.ac.uk/wp-content/uploads/2021/11/RCEM_ Why_Emergency_Department_Crowding_Matters.pdf [Accessed: 26 September 2022].

Bradshaw, C., Atkinson, S. and Doody, O. 2017. Employing a qualitative description approach in health care research. *Global Qualitative Nursing Research* 4. doi: 10.1177/2333393617742282

Bragard, I., Dupuis, G. and Fleet, R. 2015. Quality of work life, burnout, and stress in emergency department physicians: A qualitative review. *European Journal of Emergency Medicine* 22(4), pp. 227–234. doi: 0.1097/MEJ.0000000000000194

Brault, I. et al. 2014. Role clarification processes for better integration of nurse practitioners into primary healthcare teams: A multiple-case study. *Nursing Research and Practice* 2014. doi: 10.1155/2014/170514Braun, V. and Clarke, V. 2022. *Thematic Analysis: A Practical Guide*. Los Angeles; London: SAGE Publishing Limited.

Breivik, H. et al. 2008. Assessment of pain. *BJA: British Journal of Anaesthesia* 101(1), pp. 17–24. doi: 10.1093/bja/aen103

Bridges, J., Griffiths, P., Oliver, E. and Pickering, R.M. 2019. Hospital nurse staffing and staff-patient interactions: an observational study. *BMJ Quality & Safety* 28(9), pp. 706–713. doi: 10.1136/bmjqs-2018-008948

Brogan, K., Adriaenssens, J. and Kelly, H. 2015. Vocal-medical: on-line language learning and cultural preparation for emergency services. *Elia: Estudios de Lingüística Inglesa Aplicada,* 15, pp. 159-170. doi: 10.12795/elia.2015.i15.08

Broom, A. and Willis, E. 2007. Competing paradigms and health research. In: Saks, M. and Allsop, J. eds. *Researching Health: Qualitative, Quantitative and Mixed Methods*. London: SAGE, pp. 16–31.

Brophy, J. 2010. *Leadership Essentials for Emergency Medical Services*. Burlington, Massachusetts: Jones & Bartlett Learning.

Brown, J.B., Ryan, B.L., Thorpe, C., Markle, E.K.R., Hutchinson, B. and Glasier, R.H. 2015. Measuring teamwork in primary care: Triangulation of qualitative and quantitative data. *Families, Systems, & Health* 33(3), pp. 193-202.

Burke, C.S., Salas, E., Wilson-Donnelly, K. and Priest, H. 2004. How to turn a team of experts into an expert medical team: Guidance from the aviation and military communities. *BMJ Quality & Safety* 13(suppl 1), pp. i96–i104. doi: 10.1136/qshc.2004.009829

Burns, J. M. (1978). *Leadership*. New York: Harper & Row.

Burrell, G. and Morgan, G. 2017. *Sociological Paradigms and Organisational Analysis: Elements of the Sociology of Corporate Life*. Routledge.

Burtscher, M.J. and Manser, T. 2012. Team mental models and their potential to improve teamwork and safety: A review and implications for future research in healthcare. *Safety Science* 50(5), pp. 1344–1354. doi: 10.1016/j.ssci.2011.12.033

Byrne, D. 2022. A worked example of Braun and Clarke's approach to reflexive thematic analysis. *Quality & Quantity* 56(3), pp. 1391–1412. doi: 10.1007/s11135-021-01182-y

Calder, L.A. et al. 2017. Team communication patterns in emergency resuscitation: a mixed methods qualitative analysis. *International Journal of Emergency Medicine* 10(1), p.24. doi: 10.1186/s12245-017-0149-4

Campbell, S., Greenwood, M. and Walker, K. 2020. Purposive sampling: complex or simple? Research case examples. *Journal of Research in Nursing* 25(8), pp. 652–661. doi: 10.1177/1744987120927206

Cant, R.P., Porter, J.E., Cooper, S.J., Roberts, K., Wilson, I. and Gartside, C. 2016. Improving the non-technical skills of hospital medical emergency teams: The Team Emergency Assessment Measure (TEAM^{TM}). *Emergency Medicine Australasia* 28(6), pp. 641–646. doi: 10.1111/1742-6723.12643

Cantril, C., Christensen, D. and Moore, D. 2019. Standardizing roles: Evaluating oncology nurse navigator clarity, educational preparation, and scope of work within two healthcare systems. *Clinical Journal of Oncology Nursing* 23(1), p.52. doi: 10.1188/19.CJON.52-59

Caponnetto, P., Margo, R., Inguscio, L. and Cannella, M.C. 2018. Quality of life, work motivation, burn-out and stress perceptions benefits of a stress management program by autogenic training for emergency room staff: A pilot study. *Mental Illness* 10(2), pp. 67-70. doi: 10.1108/mi.2018.7913

Cardoso, L.T., Grion, C.M., Matsuo, T., Anami, E.H.T. Kauss, I.A.M. Seko, L. and Bonametti, A.M. 2011. Impact of delayed admission to intensive care units on mortality of critically ill patients: A cohort study. *Critical Care* 15(1), pp. 1–8. doi: 10.1186/cc9975

Carne, B., Kennedy, M. and Gray, T. 2012. Review article: Crisis resource management in emergency medicine. *Emergency Medicine Australasia: EMA* 24(1), pp. 7–13. doi: 10.1111/j.1742-6723.2011.01495.x

Carruthers, J. 1990. A rationale for the use of semi-structured interviews. *Journal of Educational Administration* 28(1). doi: 10.1108/09578239010006046

Carter, B., Danford, A., Howcroft, D., Richardson, H., Smith, A. and Taylor, P. 2017. Uncomfortable truths – teamworking under lean in the UK. *The International Journal of Human Resource Management* 28(3), pp. 449–467. doi: 10.1080/09585192. 2015.1111251.

Carter, S.M. and Little, M. 2007. Justifying knowledge, justifying method, taking action: Epistemologies, methodologies, and methods in qualitative research. *Qualitative Health Research* 17(10), pp. 1316–1328. doi: 10.1177/1049732307306927

Casimiro, L.M., Hall, P., Kuziemsky, C., O'Connor, M. and Varpio, L. 2015. Enhancing patient-engaged teamwork in healthcare: An observational case study. *Journal of Interprofessional Care* 29(1), pp. 55–61. doi: 10.3109/13561820.2014.940038.

Catchpole, K., Neyens, D.M. Abernathy, J., Allison, D., Joseph, A. and Reeves, S.T. 2017. Framework for direct observation of performance and safety in healthcare. *BMJ Quality & Safety* 26(12). doi: 10.1136/bmjqs-2016-006407

Cavanaugh, L.A., Bettman, J.R., Luce, M.F., Payne, J.W. 2007. Appraising the appraisal-tendency framework. *Journal of Consumer Psychology* 17(3), pp. 169–173. doi: 10.1016/S1057-7408(07)70024-4

Celona, C.A. et al. 2018. Interdisciplinary design to improve fast track in the emergency department. *Advanced Emergency Nursing Journal* 40(3), pp. 198–203. doi: 10. 1097/tme.0000000000000199

Chamberlain, K. 1999. Using grounded theory in health psychology. In: Chamberlain, K. and Murray, M. eds. *Qualitative Health Psychology: Theories and Methods*. SAGE Publishing, pp. 183–201.

Chan, T., Bakewell, F., Orlich, D. and Sherbino, J. 2014. Conflict prevention, conflict mitigation, and manifestations of conflict during emergency department consultations. *Academic Emergency Medicine* 21(3), pp. 308–313. doi: 10.1111/acem.12325

Chan, T.C., Killeen, J.P., Vilke, G.M., Marshall, J.B. and Castillo, E.M. 2010. Effect of mandated nurse–patient ratios on patient wait time and care time in the emergency department. *Academic Emergency Medicine* 17(5), pp. 545–552. doi: 10.1111/j.1553-2712. 2010.00727.x

Chandola, T. et al. 2008. Work stress and coronary heart disease: What are the mechanisms? *European Heart Journal* 29(5), pp. 640–648. doi: 10.1093/eurheartj/ehm584

Chiang, Y.-M. and Chang, Y. 2012. Stress, depression, and intention to leave among nurses in different medical units: Implications for healthcare management/nursing practice. *Health Policy* 108(2–3), pp. 149–157. doi: 10.1016/j.healthpol.2012.08.027

Chowdhury, S., Mok, D. and Leenen, Luke 2021. Transformation of health care and the new model of care in Saudi Arabia: Kingdom's Vision 2030. *Journal of Medicine and Life* 14(3), pp. 347-354. doi: 10.25122%2Fjml-2021-0070

Christian, C.K. et al. 2006. A prospective study of patient safety in the operating room. *Surgery* 139(2), pp. 159–173. doi: 10.1016/j.surg.2005.07.037

Clark, L., Birkhead, A.S. and Egger, M. 2017. A transcription and translation protocol for sensitive cross-cultural team research. *Qualitative Health Research* 27(12), pp. 1751–1764. doi: 10.1177/1049732317726761

Clark, P.G. and Drinka, T.J. 2000. *Health Care Teamwork: Interdisciplinary Practice and Teaching.* Santa Barbara, California: ABC-CLIO.

Clarke, V., Braun, V. and Hayfield, N. 2015. Thematic analysis. In: Smith, J.A. ed. *Qualitative Psychology: A Practical Guide to Research Methods* 3, London: SAGE Publishing, pp. 222–248.

Clissett, P. 2008. Evaluating qualitative research. *Journal of Orthopaedic Nursing* 12(2), pp. 99–105. doi: 10.1016/j.joon.2008.07.009

CNN. 2019, February 25. *Saudi Arabia appoints first female ambassador to the US*. Available at: https://edition.cnn.com/2019/02/24/politics/saudi-appoints-us-ambassador/index.html [Accessed: 18 May 2023].

Cohen, T.N., Griggs, A.C. and Gewertz, B.L. 2021. Advancing team cohesion: Using an escape room as a novel approach. *Journal of Patient Safety and Risk Management* 26(3), pp. 126–134. doi: 10.1177/25160435211005934

Cooke, M. 2016. TeamSTEPPS for health care risk managers: Improving teamwork and communication. *Journal of Healthcare Risk Management* 36(1), pp. 35–45. doi: 10.1002/jhrm.21233

Coombs, W.T. and Holladay, S.J. eds. 2010. *The Handbook of Crisis Communication*. Wiley.

Corbin, J. and Strauss, A. 2014. *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. SAGE publications.

Courtenay, M., Nancarrow, S. and Dawson, D. 2013. Interprofessional teamwork in the trauma setting: A scoping review. *Human Resources for Health* 11 . doi: 10.1186/1478-4491-11-57

Crabtree, B.F. and Miller, W.L. 1992. Doing qualitative research. *Annual North American Primary Care Research Group Meeting, 19th May 1989, Quebec, PQ, Canada*. SAGE Publishing, Inc

Creswell, J. W. 2014. *Research Methodology*. 4th ed. SAGE Publishing.

Creswell, J.W. and Poth, C.N. 2016. *Qualitative Inquiry and Research Design: Choosing Among Five Approaches*. SAGE Publishing.

Cristina Gasparino, R., Ferreira, T.D.M. Oliveira, H,C., dos Santos Alves, D.F. and Balsanelli, A.P. 2021. Leadership, adequate staffing and material resources, and collegial nurse-physician relationships promote better patients, professionals and institutions outcomes. *Journal of Advanced Nursing* 77(6), pp. 2739–2747. doi: 10.1111/jan.14805

Crosbie, K.M.H. 2007. *Building healthier teams: The impacts of the leadership and system practices on the job satisfaction and performance of frontline mental health and addictions workers*. MA thesis, Royal Roads University (Canada).

Crouch, S. and Housden, M. 2012. *Marketing Research for Managers*. Routledge.

Curtis, E., Jones, R., Tipene-Leach, Walker, C., Loring, B., Paine, S-J. and Reid, P. 2019. Why cultural safety rather than cultural competency is required to achieve health equity: a literature review and recommended definition. *International Journal for Equity in Health* 18, pp. 1–17. doi: 10.1186/s12939-019-1082-3

Curtis, K. et al. 2020. Nurses responding to the World Health Organization (WHO) priority for emergency care systems for universal health coverage. *International Emergency Nursing* 50. doi: 10.1016/j.ienj.2020.100876

Danish, A.Y. and Smith, H.L. 2012. Female entrepreneurship in Saudi Arabia: opportunities and challenges. *International Journal of Gender and Entrepreneurship* 4(3), pp. 216-235. doi: 10.1108/175

Darawsheh, W. 2014. Reflexivity in research: Promoting rigour, reliability and validity in qualitative research. *International Journal of Therapy and Rehabilitation* 21(12), pp. 560–568. doi: 10.12968/ijtr.2014.21.12.560

De Brún, A. and McAuliffe, E. 2020. Identifying the context, mechanisms and outcomes underlying collective leadership in teams: Building a realist programme theory. *BMC Health Services Research* 20(1), p.261. doi: 10.1186/s12913-020-05129-1

De Jong, A., Song, M. and Song, L.A. 2013. How lead founder personality affects new venture performance: The mediating role of team conflict. *Journal of Management* 39(7), pp. 1825–1854. doi: 10.1177/0149206311407509

de Waal, A. 2018. Increasing organisational attractiveness: The role of the HPO and happiness at work frameworks. *Journal of Organizational Effectiveness: People and Performance* 5(2), pp. 124-141. doi: 10.1108/JOEPP-10-2017-0080

Dempsey, L., Dowling, M., Larkin, P. and Murphy, K. 2016. Sensitive interviewing in qualitative research. *Research in Nursing & Health* 39(6), pp. 480–490. doi: 10. 1002/nur.21743

Denzin, N.K. and Lincoln, Y.S. 2011. *The SAGE Handbook of Qualitative Research*. SAGE Publishing.

Derrick, H. 2018. Interdisciplinary healthcare teams. *SPNHA Review* 14(1)p.8.

DiCicco-Bloom, B. and Crabtree, B.F. 2006. The qualitative research interview. *Medical Education* 40(4), pp. 314–321. doi: 10.1111/j.1365-2929.2006.02418.x

Diefenbach, T. and Sillince, J.A.A. 2011. Formal and informal hierarchy in different types of organization. *Organization Studies* 32(11), pp. 1515–1537. doi: 10.1177/ 0170840611421254.

DiMeglio, K. et al. 2005. Group cohesion and nurse satisfaction: Examination of a team-building approach. *JONA: The Journal of Nursing Administration* 35(3), pp. 110–120. doi: 10.1097/00005110-200503000-00003

Dinh, J.V. and Salas, E. 2017. Factors that influence teamwork. In: Salas, E., Rico, R. and Passmore, J. eds. *The Wiley Blackwell Handbook of the Psychology of Team Working and Collaborative Processes*. Wiley, pp. 13–41.

Donelan, K., DesRoches, C.M., Guzikowski, S. Dittus, R.S. and Buerhaus, P. 2020. Physician and nurse practitioner roles in emergency, trauma, critical, and intensive care. *Nursing Outlook* 68(5), pp. 591–600. doi: 10.1016/j.outlook.2020.04.010.

Dreher-Hummel, T., Nickel, C.H., Nicca, D. and Grossmann, F.F. 2021. The challenge of interprofessional collaboration in emergency department team triage–An interpretive description. *Journal of Advanced Nursing* 77(3), pp. 1368–1378. doi: 10.1111/jan.14675

Driskell, J.E., Salas, E. and Driskell, T. 2018. Foundations of teamwork and collaboration. *American Psychologist* 73(4), pp. 334-348.doi: 10.1037/amp0000241

Dubé, E., Wilson, S., Gagnon, D., Deeks, S.L. and Dubey, V. 2021. " *It takes time to build trust* ": A survey Ontario's school-based HPV immunization program ten years post-implementation. *Human Vaccines & Immunotherapeutics* 17(2), pp. 451–456. doi: 10.1080/21645515.2020.1775456

Dugan, J. 2017. *Leadership Theory Cultivating Critical Perspectives*. John Wiley & Sons.

Dworkin, S.L. 2012. Sample size policy for qualitative studies using in-depth interviews. *Archives of Sexual Behavior* 41(6), pp. 1319-1320. doi: 10.1007/s10508-012-0016-6

Easterby-Smith, M.P., Thorpe, R. and Jackson, P.R.. 2008. Management Research.. SAGE Publishing.

Easterby-Smith, M., Thorpe, R. and Jackson, P.R. 2012. *Management Research*. SAGE Publishing.

Ebneyamini, S. and Sadeghi Moghadam, M.R. 2018. Toward developing a framework for conducting case study research. *International Journal of Qualitative Methods* 17(1). doi: 10.1177/1609406918817954

Edwards, C., Seggie, J. and Murphy, M. 2012. Redesigning the response to patients with trauma. *Nursing Management* 19(3), pp. 31-36. **doi:** 10.7748/nm2012.06.19.3.31.c9120

Eppich, W.J., Gormley, G.J. and Teunissen, P.W. 2019. In-depth interviews. In: Nestel, D., Hui, J., Kunkler, K., Scerbo, M. and Calhoun, A. eds. *Healthcare Simulation Research*. Cham: Springer, pp. 85-91. doi: 10.1007/978-3-030-26837-4_12

Erenler, A.K., Akbulut, S., Guzel, M., Cetinkaya, H., Karaca, A., Turkoz, B. and Baydin, A. 2014. Reasons for overcrowding in the emergency department: experiences and suggestions of an education and research hospital. *Turkish Journal of Emergency Medicine* 14(2), pp. 59–63. doi: 10.5505/1304.7361.2014.48802

Ervin, J.N., Kahn, J. M., Cohen, T. R. and Weingart, L. R 2018. Teamwork in the intensive care unit. *American Psychologist* 73(4), pp. 468-477. doi: 10.1037/amp0000247

Esmaeilpour, M., Salsali, M. and Ahmadi, F. 2011. Workplace violence against Iranian nurses working in emergency departments. *International Nursing Review* 58(1), pp. 130–137. doi: 10.1111/j.1466-7657.2010.00834.x

Estryn-Behar, M. et al. 2011. Emergency physicians accumulate more stress factors than other physicians–results from the French SESMAT study. *Emergency Medicine Journal* 28(5), pp. 397–410. doi: 10.1136/emj.2009.082594

Etikan, I., Musa, S.M. and Alkassim, R.S. 2016. Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics* 5(1), pp. 1–4. doi: 10.11648/j.ajtas.20160501.11

Fatahi, N., Mattsson, B., Lundgren, S.M. and Hellström, M. 2010. Nurse radiographers' experiences of communication with patients who do not speak the native language. *Journal of Advanced Nursing* 66(4), pp. 774–783. doi: 10.1111/j.1365-2648.2009.05236.x

Febriansyah, F., Kusumapradja, R. and Ahmad, H. 2020. The role of teamwork in improving patient safety culture. *JMMR (Jurnal Medicoeticolegal dan Manajemen Rumah Sakit)* 9(1), pp. 41–52. doi: 10.18196/jmmr.91115

Feistritzer, N.R. and Jones, P.O. 2014. A proof-of-concept implementation of a unit-based advanced practice registered nurse (APRN) role: Structural empowerment, role clarity and team effectiveness. *The Nursing Clinics of North America* 49(1), pp. 1–13. doi: 10.1016/j.cnur.2013.11.009

Fernandez, R., Kozlowski, S.W.J. Shapiro, M.J. and Salas, E. 2008. Toward a definition of teamwork in emergency medicine. *Academic Emergency Medicine* 15(11), pp. 1104–1112. doi: 10.1111/j.1553-2712.2008.00250.x.

Ferrari, R. 2015. Writing narrative style literature reviews. *Medical Writing* 24(4), pp. 230–235. doi: 10.1179/2047480615Z.000000000329

Fink, A. 2019. *Conducting Research Literature Reviews: From the Internet to Paper*. SAGE Publishing.

Firestone, S. 2020. What is crisis leadership? In: Firestone, S. ed. *Biblical Principles of Crisis Leadership*. Cham: Springer International Publishing, pp. 7–21.

Firth-Cozens, J. 2001. Cultures for improving patient safety through learning: The role of teamwork. *Quality in Health Care: QHC* 10(Suppl 2), pp. ii26-ii31. doi: 10.1136/qhc.0100026

Fisher, C.D. 2010. Happiness at work. *International Journal of Management Reviews* 12(4), pp. 384–412. doi: 10.1111/j.1468-2370.2009.00270.x

Flick, U. 2018. Triangulation in data collection. In: Flick, U. ed. *The SAGE Handbook of Qualitative Data Collection*. SAGE Publishing, pp. 527–544.=. doi: 10.4135/9781526416070

Flowerdew, L., Brown, R., Vincent, C. and Woloshynowych, M. 2012. Teams under pressure in the emergency department: an interview study. *Emergency Medicine Journal: EMJ* 29(12), p. e2. doi: 10.1136/emermed-2011-200084.

Flyvbjerg, B. 2006. Five misunderstandings about case-study research. *Qualitative Inquiry* 12(2), pp. 219–245. doi: 10.1177/1077800405284363.

Ford, K., Menchine, M., Burner, E., Arora, S., Inaba, K., Demetriades, D. and Yersin, B. 2016. Leadership and teamwork in trauma and resuscitation. *Western Journal of Emergency Medicine* 17(5), pp. 549-556. doi: 10.5811/westjem.2016.7.29812

Foronda, C., MacWilliams, B. and McArthur, E. 2016. Interprofessional communication in healthcare: An integrative review. *Nurse Education in Practice* 19, pp. 36–40. doi: 10.1016/j.nepr.2016.04.005

Franz, S., Muser, J., Thielhorn, U., Wallesch, C. W. and Behrens, J. 2020. Inter-professional communication and interaction in the neurological rehabilitation team: a literature review. *Disability and Rehabilitation* 42(11), pp. 1607–1615. doi:10.1080/09638288. 2018.1528634

Friberg, K., Husebø, S.E., Olsen, Ø. E. and Hansen, B.S. 2016. Interprofessional trust in emergency department – as experienced by nurses in charge and doctors on call. *Journal of Clinical Nursing* 25(21–22), pp. 3252–3260. doi: 10.1111/jocn.13359

Gajjar, D. 2013. Ethical consideration in research. *Education* 2(7), pp. 8–15.

Galletta, A. 2013. *Mastering the Semi-Structured Interview and Beyond: From Research Design to Analysis and Publication*. New York, New York: NYU Press.

Gallo, A. 2018, January 3. Why we should be disagreeing more at work. *Harvard Business Review*.

García-Ramírez, Y. 2021. Belbin's team roles and their performance in road design courses: a study with undergraduate and postgraduates students. *Espacios* 42(1), pp. 176–188. 10.48082/espacios-a21v42n01p15Gardner, W.L., Karam, E.P., Alvesson, M. and Eniola, K. 2021. Authentic leadership theory: The case for and against. *The Leadership Quarterly* 32(6). doi: 10.1016/j.leaqua.2021.101495

Gazzaz, L.A. 2009. *Saudi nurses' perceptions of nursing as an occupational choice: a qualitative interview study*. PhD Thesis, University of Nottingham.

Geiger, I. et al. 2021. Improving care coordination for patients with cardiac disease: study protocol of the randomised controlled new healthcare programme (Cardiolotse). *Contemporary Clinical Trials* 103. doi: 10.1016/j.cct.2021.106297

General Authority for Statistics 2017. *Sixteenth Service Manual: the Northern Border Region*. Available at: http://stat.mynaseej.net/sites/default/files/2019-07/northern_borders_region_ar. pdf [Accessed: 28 January 2020].

General Authority for Statistics 2019. *Population Estimates, Statistical Yearbook of 2019*. Available at: https://www.stats.gov.sa/en/1006 [Accessed: 11 June 2023].

General Authority for Statistics 2020. *The Total Population*. Available at: https://www.stats.gov.sa/en/indicators/1 [Accessed: 20 January 2020].

Gergerich, E., Boland, D. and Scott, M. A. (2018) Hierarchies in interprofessional training. *Journal of Interprofessional Care*, 33(5), pp. 528–535. doi:10.1080/ 13561820.2018.1538110.

Gharaveis, A., Hamilton, D.K, Pati, D. and Shepley, M. 2018. The impact of visibility on teamwork, collaborative communication, and security in emergency departments: An exploratory study. *HERD* 11(4), pp. 37–49. doi: 10.1177/1937586717735290.

Gharaveis, A., Hamilton, D.K., Shepley, M., Pati, D. and Rodiek, S. 2019. Design suggestions for greater teamwork, communication and security in hospital emergency departments. *Indoor and Built Environment* 28(8), pp. 1126–1139. doi: 10.1177/1420326X19836209

Ghimire, B. 2020. Achieving work-life balances through flexible work practices. *Pravaha* 26(1), pp. 31–38. doi: 10.3126/pravaha.v26i1.41649

Given, L.M. 2008. *The SAGE Encyclopedia of Qualitative Research Methods*. SAGE Publishing.

Gluyas, H. 2015. Effective communication and teamwork promotes patient safety. *Nursing Standard (2014+)* 29(49), p. 50. doi:10.7748/ns.29.49.50.e10042

Goh, P.Q.L., Ser, T.F., Cooper, S., Cheng, L.J. and Liaw, S. Y. 2020. Nursing teamwork in general ward settings: A mixed-methods exploratory study among enrolled and registered nurses. *Journal of Clinical Nursing* 29(19–20), pp. 3802–3811. doi: 10.1111/jocn.15410

Goldman, E.F., Plack, M.M., Roche, C.N., Smith, J.P. and Turley, C.L. 2011. Learning clinical versus leadership competencies in the emergency department: strategies, challenges, and supports of emergency medicine residents. *Journal of Graduate Medical Education* 3(3), pp. 320–325. doi: 10.4300/JGME-D-10-00193.1

Goleman, D. and Boyatzis, R. 2008. Social intelligence and the biology of leadership. *Harvard Business Review* 86(9), pp. 74–81.

Goodsell, T.L. 2013. The interpretive tradition in social science. *Annual Conference of the National Council on Family Relations*, San Antonio, TX.

Gorsky, M. and Mold, A. 2020. Documentary analysis. In: Pope, C. and Mays, N. eds. *Qualitative Research in Health Care*, pp. 83–96. doi: 10.1002/9781119410867.ch7

Gough, D., Thomas, J. and Oliver, S. 2017. *An Introduction to Systematic Reviews*. SAGE Publishing.

Goulding, C. 2005. Grounded theory, ethnography and phenomenology: A comparative analysis of three qualitative strategies for marketing research. *European Journal of Marketing* 39(3/4), pp. 294-308. doi: 10.1108/0309056051058

Graham, S., Dalke, K. and Jones, I. 2017. *Exploring Physician Assistant (PA) autonomy and the relationship between PAs and supervising physician(s) in Canada*. Master of Physician Assistant Capstone Studies, University of Manitoba.

Grbich, C. 2013. *Qualitative Data Analysis*. 2nd ed. SAGE Publishing.

Green, J., Willis, K., Hughes, E., Small, R., Welch, N., Gibbs, L. and Daly, J. 2007. Generating best evidence from qualitative research: The role of data analysis. *Australian and New Zealand Journal of Public Health* 31(6), pp. 545–550. doi: 10.1111/j.1753-6405.2007.00141.x

Greer, L.L.., de Jong, B. A., Schouten, M. E. and Dannals, J. E. 2018. Why and when hierarchy impacts team effectiveness: A meta-analytic integration. *Journal of Applied Psychology* 103(6), p. 591-613. doi: 10.1037/apl0000291

Gregov, L., Kovačević, A. and Slišković, A. 2011. Stress among Croatian physicians: Comparison between physicians working in emergency medical service and health centers: Pilot study. *Croatian Medical Journal* 52(1), pp. 8–15. doi: 10.3325/cmj.2011.52.8Griffiths, D., Morphet, J., Innes, K., Crawford, K. and Williams, A. 2014. Communication between residential aged care facilities and the emergency department: A review of the literature. *International Journal of Nursing Studies* 51(11), pp. 1517–1523. doi: 10.1016/j.ijnurstu.2014.06.002

Grobler, C.P., Louwrens, C.P. and von Solms, S.H. 2010. A multi-component view of digital forensics. In: *2010 International Conference on Availability, Reliability and Security*. IEEE, pp. 647–652. doi:10.1109/ARES.2010.61

Grossman, R., Campo, M.S., Feitosa, J. and Salas, E 2021. Cross-cultural perspectives on collaboration: Differences between the Middle East and the United States. *Journal of Business Research* 129, pp. 2–13. doi: 10.1016/j.jbusres.2021.02.031

Grover, E., Porter, J.E. and Morphet, J. 2017. An exploration of emergency nurses' perceptions, attitudes and experience of teamwork in the emergency department. *Australasian Emergency Nursing Journal* 20(2), pp. 92–97. doi: 10.1016/j.aenj.2017.01.003

Gubrium, J.F. and Holstein, J.A. 2012. Narrative practice and the transformation of interview. In: Gubrium, J.F., Holstein, J.A., Marvasti , A.B. and McKinney, K.D. eds. *SAGE Handbook of Interview Research*. SAGE Publishing, pp.27-44

Gudur, R.R., McDonagh, D., Harris, M.T. and Rogers, W.A. 2020. Design as a catalyst: A pedagogical framework. I *Proceedings of the 22nd International Conference on Engineering and Product Design Education (E&PDE 2020),* VIA Design, VIA University in Herning, Denmark. 10th-11th September 2020.

Gutiérrez, L., Flores, V., Keith, B. and Quelopana, A. 2019. Using the Belbin method and models for predicting the academic performance of engineering students. *Computer Applications in Engineering Education* 27(2), pp. 500–509. doi: 10.1002/cae.22092

Guttmann, A., Schull, M.J., Marian J Vermeulen, M. and Stukel, T.A. 2011. Association between waiting times and short term mortality and hospital admission after departure from emergency department: population based cohort study from Ontario, Canada. *BMJ*2011, 342. doi: 10.1136/bmj.d2983

Hadi, M.A. and José Closs, S. 2016. Ensuring rigour and trustworthiness of qualitative research in clinical pharmacy. *International Journal of Clinical Pharmacy* 38, pp. 641–646. doi: 10.1007/s11096-015-0237-6

Hai-ping, Y., Wei-Ying, Z., You-qing, P., Yun-Ying, H., Chi, C., Yang-yang, L. and Li-li, H. 2020. Emergency medical staff's perceptions on cultural value difference-based teamwork issues: A phenomenological study in China. *Journal of Nursing Management* 28(1), pp. 24–34. doi: 10.1111/jonm.12854

Haji, A.M. 2023. Attitude of family medicine residents toward team-based care in primary healthcare centers in Saudi Arabia. *Journal of Family & Community Medicine* 30(2), p. 123-130. doi: 10.4103/jfcm.jfcm_300_22

Halevy, N., Chou, E.Y. and Galinsky, A.D. 2011. A functional model of hierarchy: Why, how, and when vertical differentiation enhances group performance. *Organizational Psychology Review* 1(1), pp. 32–52. doi: 10.1177/2041386610380991

Han, Y., Yuan, Y., Zhang, L. and Fu, Y. 2016. Sleep disorder status of nurses in general hospitals and its influencing factors. *Psychiatria Danubina* 28(2), pp. 176–183.

Hardicre, J. 2014. Valid informed consent in research: An introduction. *British Journal of Nursing* 23(11), pp. 564–567. doi: 10.12968/bjon.2014.23.11.564

Harding, J. 2018. *Qualitative Data Analysis: From Start to Finish*. SAGE Publishing.

Hardon, A., Hodgkin, C. and Fresle, D. 2004. *How to investigate the use of medicines by consumers*. World Health Organization. Available at: https://iris.who.int/bitstream/handle/10665/68840/WHO_EDM_PAR_2004.2.pdf?sequence=1&isAllowed=y [Accessed: 15 August 2024].

Härgestam, M. 2015. *Negotiated knowledge positions: communication in trauma teams*. PhD Thesis, Umeå Universitet.

Härgestam, M., Hultin, M., Brulin, C. and Jacobsson, M. 2016. Trauma team leaders' non-verbal communication: video registration during trauma team training. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 24,(37), pp. 1–10. doi: 10.1186/s13049-016-0230-7

Hart, C. 2018. *Doing a Literature Review: Releasing the Research Imagination*. London: Sage Publishing.

Hartley, J. 2004. What is a case study? In: Cassell, C. and Symon, G. eds. *Essential Guide to Qualitative Methods in Organizational Research.* SAGE Publications, p.323.

Hassan, I. 2018. Avoiding medication errors through effective communication in healthcare environment. *Movement, Health & Exercise* 7(1), pp. 113–126. doi: 10.2139/ssrn.3573437Hayirli, T., Stark, N., Hardy, J., Kerrissey, M. and Peabody, C. 2022. 233 Characteristics of leadership communication associated with burnout and teamwork experience among emergency department staff during the COVID-19 Pandemic. *Annals of Emergency Medicine* 80(4), p. S102. doi: 10.1016/j.annemergmed.2022.08.256

Hays, N.A. and Bendersky, C. 2015. Not all inequality is created equal: Effects of status versus power hierarchies on competition for upward mobility. *Journal of Personality and Social Psychology* 108(6), pp. 867-882. doi: 10.1037/pspi0000017

Heale, R. and Twycross, A. 2018. What is a case study? *Evidence-Based Nursing* 21(1), pp.7-8. doi: 10.1136/eb-2017-102845

Helsloot, I. and Groenendaal, J. 2017. It's meaning making, stupid! Success of public leadership during flash crises. *Journal of Contingencies and Crisis Management* 25(4), pp. 350–353. doi: 10.1111/1468-5973.12166.

Heng, K.W. 2014. Teaching and evaluating multitasking ability in emergency medicine residents-what is the best practice? *International Journal of Emergency Medicine* 7(1). doi: 10.1186/s12245-014-0041-4

Henry, B.W., McCarthy, D.M., Nannicelli, A.P., Seivert, N.P. and Vozenilek, J.A. 2016. Patients' views of teamwork in the emergency department offer insights about team performance. *Health Expectations: An International Journal of Public Participation in Health Care and Health Policy* 19(3), pp. 702–715. doi: 10.1111/hex.12148

Hershkovich, O., Gilad, D., Zimlichman, E. and Kreiss, Y. 2016. Effective medical leadership in times of emergency: A perspective. *Disaster and Military Medicine* 2(1).doi:10.1186/s40696-016-0013-8

Hesse-Biber, S.N. 2007. The practice of feminist in-depth interviewing. In: Hesse-Biber, S.N. ed. *Feminist Research Practice*. SAGE Publishing, pp. 111–138.

Heyhoe, J., Birks, Y., Harrison, R., O'Hara, J.K., Cracknell, A. and Lawton, R. 2016. The role of emotion in patient safety: Are we brave enough to scratch beneath the surface? *Journal of the Royal Society of Medicine* 109(2), pp. 52–58. doi: 10.1177/0141076815620614

Horn, D., Lindström, M. and Rosengren, K. 2018. Managing a stressful work environment through improved teamwork: A qualitative content analysis of nurses working environment within emergency care. *International Archives of Nursing and Health Care* 4(109), pp. 1–9.

Hsiang, S. et al. 2020. The effect of large-scale anti-contagion policies on the COVID-19 pandemic. *Nature* 584(7820), pp. 262–267. doi: 10.1038/s41586-020-2404-8

Huang, Y.-L., Yates, P. and Prior, D. 2009. Accommodating the diverse cultural needs of cancer patients and their families in palliative care. *Cancer Nursing* 32(1), pp. E12–E21. doi: 10.1097/01.NCC.0000343370.16894.b7

Hudson, C.C., Gauvin, S., Tabanfar, R., Poffenroth, A.M., Lee, J.S. and O'Riordan, A.L. 2017. Promotion of role clarification in the health care team challenge. *Journal of Interprofessional Care* 31(3), pp. 401–403. doi: 10.1080/13561820.2016.1258393

Husebø, S.E. and Olsen, Ø.E. 2016. Impact of clinical leadership in teams' course on quality, efficiency, responsiveness and trust in the emergency department: study protocol of a trailing research study. *BMJ Open* 6(8), p. e011899. doi: 10.1136/bmjopen-2016-011899

Hultsjö, S. and Hjelm, K. 2005. Immigrants in emergency care: Swedish health care staff's experiences. *International Nursing Review* 52(4), pp. 276–285. doi: 10.1111/j.1466-7657.2005.00418.x

Humanson, R. and Nordeman, P. 2017. *Proactive Crisis Management (PCM): Perceptions of crisis-awareness and crisis-readiness in organizations in relation with their actual strategic initiatives against industrial crises caused by human errors*. Available at: https://www.diva-portal.org/smash/record.jsf?pid=diva2:1158145 [Accessed: 23 January 2024].

Hutchinson, M. and Jackson, D. 2013. Transformational leadership in nursing: towards a more critical interpretation. *Nursing Inquiry* 20(1), pp. 11–22. doi: 10.1111/nin.12006.

Ijasan, K. 2011. *Contextualising the participatory role of BMEs in community regeneration: a requirements and challenge approach*. PhD dissertation, University of Salford (United Kingdom).

Iserson, K.V. and Moskop, J.C. 2007. Triage in medicine, part I: concept, history, and types. *Annals of Emergency Medicine* 49(3), pp. 275–281. doi: 10.1016/j.annemergmed. 2006.05.019

Jaiswal, A. 2014. Study the relation between fatigue, sleepiness and accidents among the workers of Indian Weaving Industries. *International Journal of Scientific Footprints* 2, pp. 18–30. doi:10.1186/s13049-016-0230-7

James, A. and Stanley, D. 2024. *Notes on... Nursing Leadership.* John Wiley & Sons Ltd.

James, A.H. and Bennett, C.L. 2022. Leading teams. In: Stanley, D., Bennett, C. and James, A.H. eds. *Clinical Leadership in Nursing and Healthcare*. 3rd ed. Wiley, pp. 227–244.

James, S.M., Honn, K.A., Gaddameedhi, S. and Van Dongen, H.P.A. 2017. Shift work: Disrupted circadian rhythms and sleep—Implications for health and well-being. *Current Sleep Medicine Reports* 3(2), pp. 104–112. doi: 10.1007/s40675-017-0071-6

James, S., Subedi, P., Indrasena, B.S.H. and Aylott, J. 2022. Review DebrIeF: a collaborative distributed leadership approach to "hot debrief" after cardiac arrest in the emergency department–a quality improvement project. *Leadership in Health Services* 35(3), pp. 390–408. doi: 10.1108/LHS-06-2021-0050

Jawhar, S.S., Alhawsawi, S., Asaad Jawhar, S., Ahmed M. E. and Almehdar, K. 2022. Conceptualizing Saudi women's participation in the knowledge economy: The role of education. *Heliyon* 8(8), E10256. doi: 10.1016/j.heliyon.2022.e10256

Jennings, J.F. et al. 2022. The association of teamwork and adverse tracheal intubation–associated events in advanced airway management in the PICU. *Journal of Pediatric Intensive Care*, p. s-0042-1756715. /doi: 10.1055/s-0042-1756715

Jerng, J.-S. et al. 2017. Workplace interpersonal conflicts among the healthcare workers: Retrospective exploration from the institutional incident reporting system of a university-affiliated medical center. *PLoS One* 12(2), p. e0171696. doi: 10.1371 /journal.pone.0171696

Johnsen, B.H., Westli, H.K., Espevik, R., Wisborg, T. and Brattebo, G. 2017. High-performing trauma teams: frequency of behavioral markers of a shared mental model displayed by team leaders and quality of medical performance. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 25(1), p. 109. doi: 10.1186/s13049-017-0452-3.

Johnson, J.L., Adkins, D. and Chauvin, S. 2020. A review of the quality indicators of rigor in qualitative research. *American Journal of Pharmaceutical Education* 84(1). doi: 10.5688/ajpe7120

Johnston, A., Abraham, L., Greenslade, J., Thom, O., Carlstrom, E., Wallis, M. and Crilly. J. 2016. Review article: Staff perception of the emergency department working environment: Integrative review of the literature. *Emergency Medicine Australasia: EMA* 28(1), pp. 7–26. doi: 10.1111/1742-6723.12522

Jones, A. 2019. The Tuckman's model implementation, effect, and analysis & the new development of Jones LSI Model on a small group. *Journal of Management* 6(4), pp, 23-28. doi: 10.34218/JOM.6.4.2019.005

Jones, F., Podila, P. and Powers, C. 2013. Creating a culture of safety in the emergency department: The value of teamwork training. *JONA: The Journal of Nursing Administration* 43(4), pp. 194–200. doi:10.1097/NNA.0b013e31828958cd

Joniaková, Z., Jankelová, N., Blštáková, J. and Némethová, I. 2021. Cognitive diversity as the quality of leadership in crisis: Team performance in health service during the COVID-19 pandemic. *Healthcare* 9(3). doi: 10.3390/healthcare9030313

Joshi, B.S. 2019. Leadership style paradigm shift in hospital industry: Need of the day, in comparison with hospitality industry. *Journal of Health Management* 21(1), pp. 141–153. doi: 10.1177/0972063418822195

Joslin, R. and Müller, R. 2016. Identifying interesting project phenomena using philosophical and methodological triangulation. *International Journal of Project Management* 34(6), pp. 1043–1056. doi: 10.1016/j.ijproman.2016.05.005

Kalina, S. 2015. ***Ethical challenges in different interpreting settings***. *MonTI. Monographs in Translation and Interpreting*, pp. 63–86. doi: 10.6035/MonTI.2015.ne2.2

Kalisch, B.J., Lee, H. and Rochman, M. 2010. Nursing staff teamwork and job satisfaction. *Journal of Nursing Management* 18(8), pp. 938–947. doi: 10.1111/j.1365-2834.2010.01153.x

Karnieli-Miller, O., Strier, R. and Pessach, L. 2009. Power relations in qualitative research. *Qualitative Health Research* 19(2), pp. 279–289. doi: 10.1177/1049732308329306

Kawulich, B. 2012. Collecting data through observation. In: Kawulich, B., Wagner, C. and Garner, M. eds. *Doing Social Research: A Global Context*. McGraw-Hill Higher Education, pp. 150 –160.

Keen, J. and Packwood, T. 2000. Using case studies in health services and policy research. In. Pope, C. and Mays, N, eds. *Qualitative Research in Health Care* 2. London: British Medical Journal Books, pp. 50–58.

Keshmiri, F. and Moradi, K. 2020. Perceptions of Iranian emergency department directors of interprofessional leadership: an interview study. *Journal of Interprofessional Care* 34(6), pp. 747–755. doi: 10.1080/13561820.2019.1672632

Khademian, Z., Sharif, F., Tabei, S.Z. Bolandparvaz, S., Abbaszadeh, A. and Abbasi, H. R. 2013. Teamwork improvement in emergency trauma departments. *Iranian Journal of Nursing and Midwifery Research* 18(4), pp. 333-339.

Khattab, E., Sabbagh, A., Aljerian, N., Binsalleeh, H., Almulhim, M., Alqahtani, A. and Alsalamah. M. 2019. Emergency medicine in Saudi Arabia: A century of progress and a bright vision for the future. *International Journal of Emergency Medicine* 12(1), p.16. doi: 10.1186/s12245-019-0232-0

Khattak, M.A., Quarat-Ul-Ain and Iqbal, N. 2013. Impact of role ambiguity on job satisfaction, mediating role of job stress. *International Journal of Academic Research in*

Accounting, Finance and Management Sciences 3(3), pp. 28–39. doi: 10.6007/IJARAFMS/v3-i3/33

Kilner, E. and Sheppard, L.A. 2010. The role of teamwork and communication in the emergency department: A systematic review. *International Emergency Nursing* 18(3), pp. 127–137. doi:10.1016/j.ienj.2009.05.006

Kilpatrick, K., Lavoie-Tremblay, M., Ritchie, J.A. Lamothe, L. and Doran, D. 2012. Boundary work and the introduction of acute care nurse practitioners in healthcare teams. *Journal of Advanced Nursing* 68(7), pp. 1504–1515. doi: 10.1111/j.1365-2648.2011.05895.x

King, G., Shawn, L., Orchard, C.A. and Miller, S. 2010. The interprofessional socialization and valuing scale: A tool for evaluating the shift toward collaborative care approaches in health care settings. *Work* 35(1), pp. 77–85. doi: 10.3233/WOR-2010-0959

King, N., Horrocks, C. and Brooks, J. eds. 2018. *Interviews in Qualitative Research*. SAGE Publishing.

Kipnis, A., Rhodes, K.V., Burchill, C.N. and Datner, E. 2013. The relationship between patients' perceptions of team effectiveness and their care experience in the emergency department. *The Journal of Emergency Medicine* 45(5), pp. 731–738. doi: 10.1016/j.jemermed.2012.11.052

Kivunja, C. and Kuyini, A.B. 2017. Understanding and applying research paradigms in educational contexts. *International Journal of Higher Education* 6(5), pp. 26–41. doi: 10.5430/ijhe.v6n5p26 Knapp, M.L., Hall, J.A. and Horgan, T.G. 2013. *Nonverbal Communication in Human Interaction*. Cengage Learning.

Kostovicova, D. and Knott, E. 2022. Harm, change and unpredictability: The ethics of interviews in conflict research. *Qualitative Research* 22(1), pp. 56–73. doi: 10.1177/1468794120975657

Kouvonen, A. et al. 2013. Chronic workplace stress and insufficient physical activity: A cohort study. *Occupational and Environmental Medicine* 70(1), pp. 3–8. doi: 10.1136/ oemed-2012-100808

Kowalenko, T. et al. 2012. Workplace violence in emergency medicine: Current knowledge and future directions. *The Journal of Emergency Medicine* 43(3), pp. 523–531. doi: 10.1016/j.jemermed.2012.02.056

Kukull, W.A. and Ganguli, M. 2012. Generalizability. *Neurology* 78(23), pp. 1886–1891. doi: 10.1212/WNL.0b013e318258f812

Kulstad, E.B., Sikka, R., Sweis, R.T., Kelley, K.M. and Rzechula, K.H. 2010. ED overcrowding is associated with an increased frequency of medication errors. *The American Journal of Emergency Medicine* 28(3), pp. 304–309. doi: 10.1016/ j.ajem.2008.12.014

Kulwicki, A.D., Miller, J. and Schim, S.M 2000. Collaborative partnership for culture care: Enhancing health services for the Arab community. *Journal of Transcultural Nursing* 11(1), pp. 31–39. doi: 10.1177/104365960001100106

Kumar, R. 2018. *Research Methodology: A Step-by-Step Guide for Beginners*. SAGE Publishing.

Kvale, S. and Brinkmann, S. 2009. *Interviews: Learning the Craft of Qualitative Research Interviewing*. SAGE Publishing.

Kyngäs, H., Kääriäinen, M. and Elo, S. 2020. The trustworthiness of content analysis. In: Kyngäs, H., Mikkonen,K. and Kääriäinen, M. eds. *The Application of Content Analysis in Nursing Science Research*. Cham: Springer, pp. 41-48. doi: 10.1007/978-3-030-30199-6_5

Labrague, L.J. 2024. Relationship between transformational leadership, adverse patient events, and nurse-assessed quality of care in emergency units: The mediating role of work satisfaction. *Australasian Emergency Care*, 27(1), pp. 49-56. doi: 10.1016/j.auec.2023.08.001

Ladha, T., Zubairi, M., Hunter, A., Audcent, T. and Johnstone, J. 2018. Cross-cultural communication: Tools for working with families and children. *Paediatrics & Child Health* 23(1), pp. 66–69. doi: 10.1093/pch/pxx126

Lahiri, K., Indrasena, B.S.H. and Aylott, J. 2021. Unprecedented times in the emergency department: are "board rounds" and leadership the missing links to improve patient flow? *Leadership in Health Services* 35(1), pp. 74–90. doi: 10.1108/LHS-06-2021-0056

Lake, D., Baerg, K. and Paslawsk, T. 2015. *Teamwork, Leadership and Communication: Collaboration Basics for Health Pprofessionals*. Edmonton, Alberta: Brush Education.

Lapierre, A., Lefebvre, H. and Gauvin-Lepage, J. 2019. Factors affecting interprofessional teamwork in emergency department care of polytrauma patients: Results of an exploratory study. *Journal of Trauma Nursing* 26(6), pp. 312–322. doi:10.1097/JTN.0000000000000469

Lateef, F. 2018. Grace under pressure: Leadership in emergency medicine. *Journal of Emergencies, Trauma, and Shock* 11(2), p. 73-79. /doi: 10.4103/JETS.JETS_18_18

Lauren, E., Howard, E. and John, L. 2017. Internal dispute resolution: The transformation of civil rights in the workplace. In: Nielsen, L.B. ed. *Theoretical and Empirical Studies of Rights*. Routledge pp. 395–432.

Lee, S.T. and Park, G. 2020. Does diversity in team members' agreeableness benefit creative teams? *Journal of Research in Personality* 85. doi: 10.1016/j.jrp.2020.103932

Lee, V. and Landers, R.N. 2022. Sampling strategies for quantitative and qualitative business research. In: *Oxford Research Encyclopedia of Business and Management*. Oxford University Press. doi: 10.1093/acrefore/9780190224851.013.216

Lehman, C.D., Lamb, L.R. and D'Alessandro, H.A. 2021. Mitigating the impact of coronavirus disease (COVID-19) vaccinations on patients undergoing breast imaging examinations: A pragmatic approach. *American Journal of Roentgenology* 217(3), pp. 584–586. doi: 10.2214/AJR.21.25688

Leite, H., Lindsay, C. and Kumar, M. 2020. COVID-19 outbreak: Implications on healthcare operations. *The TQM Journal* 33(1), pp. 247–256. doi: 10.1108/TQM-05-2020-0111

Lennox-Chhugani, N. 2023. Inter-disciplinary work in the context of integrated care–A theoretical and methodological framework. *International Journal of Integrated Care* 23(2), p.29. doi: 10.5334/ijic.7544Leonard, M., Graham, S. and Bonacum, D. 2004.The human factor: the critical importance of effective teamwork and communication in providing safe care. *BMJ Quality & Safety* 13(suppl 1), pp. i85–i90. doi: 10.1136/qshc.2004.010033

Levac, D., Colquhoun, H. and O'Brien, K.K. 2010. Scoping studies: Advancing the methodology. *Implementation Science* 5(1), pp. 1–9. doi: 10.1186/1748-5908-5-69

Li, J. et al. 2018. Interprofessional Teamwork Innovation Model (ITIM) to promote communication and patient-centred, coordinated care. *BMJ Quality & Safety* 27(9), pp. 700–709. doi: 10.1136/bmjqs-2017-007369

Lincoln, Y, S. and Guba, E.G. 1985. *Naturalistic Inquiry*. London: SAGE Publishing.

Lindqvist, S. 2015. Interprofessional communication and its challenges. In: Brown, J., Noble, L.M., Papageorgiou, A. and Kidd, J. eds. *Clinical Communication in Medicine*. Wiley. pp. 157–167.

Lindsay, P.H. and Norman, D.A. 2013. *Human Information Processing: An Introduction to Psychology*. Academic Press.

Littlewood, J. and Yousuf, S. 2000. Primary health care in Saudi Arabia: applying global aspects of health for all, locally. *Journal of Advanced Nursing* 32(3), pp. 675–681. doi: 10.1046/j.1365-2648.2000.01527.x

Liu, J., Masiello, I., Ponzer, S. and Farrokhnia, N. 2019. Interprofessional teamwork versus fast track streaming in an emergency department-An observational cohort study of two strategies for enhancing the throughput of orthopedic patients presenting limb injuries or back pain. *PloS One* 14(7), p. e0220011. 10.1371/journal.pone.0220011

Liu, S.W., Thomas, S.H., Gordon, J.A., Hamedani, A.G. and Weissman, J.S. 2009. A pilot study examining undesirable events among emergency department–boarded patients awaiting inpatient beds. *Annals of Emergency Medicine* 54(3), pp. 381–385. doi: 10.1016/j.annemergmed.2009.02.001

Lorié, Á., Reinero, D.A., Phillips M., Zhang, L. and Riess, H. 2017. Culture and nonverbal expressions of empathy in clinical settings: A systematic review. *Patient Education and Counseling* 100(3), pp. 411–424. doi: 10.1016/j.pec.2016.09.018

Lovric, D. and Chamorro-Premuzic, T. 2018, June 28. Too much team harmony can kill creativity. *Harvard Business Review*. Available at: https://hbr.org/2018/06/too-much-team-harmony-can-kill-creativity [Accessed: 15 August 2024].

Lu, Y. et al. 2017. The relationship between job satisfaction, work stress, work-family conflict, and turnover intention among physicians in Guangdong, China: A cross-sectional study. *BMJ Open* 7(5), e014894. doi: 10.1136/bmjopen-2016-014894

Lubbad and Al-Aseri, M.P.H. 2015. Utilization of emergency department from the perspectives of Saudi population.

Ly, O., Sibbald, S.L. Verma, J.Y. and Rocker, G.M. 2018. Exploring role clarity in interorganizational spread and scale-up initiatives: the 'INSPIRED' COPD collaborative. *BMC Health Services Research* 18(1), p. 680. doi: 10.1186/s12913-018-3474-2

Lyubovnikova, J., West, M. A., Dawson, J. F. and Carter, M. R. 2015. 24-Karat or fool's gold? Consequences of real team and co-acting group membership in healthcare organizations. *European Journal of Work and Organizational Psychology* 24(6), pp. 929–950. doi: 10.1080/1359432X.2014.992421

MacLeod, A. and Mann, K. 2022. Constructivism: Learning theories and approaches to research. In: Cleland, J. and Durning, S.J. eds. *Researching Medical Education*. Wiley, pp. 25–40.

Madsen, F., Ladelund, S. and Linneberg, A. 2014. High levels of bed occupancy associated with increased inpatient and thirty-day hospital mortality in Denmark. *Health Affairs* 33(7), pp. 1236–1244. doi: 10.1377/hlthaff.2013.1303

Magarey, J.M. 2001. Elements of a systematic review. *International Journal of Nursing Practice* 7(6), pp. 376–382. doi: 10.1046/j.1440-172X.2001.00295.x

Maguire, M. and Delahunt, B. 2017. Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *AISHE-J: The All Ireland Journal of Teaching and Learning in Higher Education* 9(3). doi: 10.62707/aishej.v9i3.335 Majid, M.A.A., Othman, M. Mohamad, S.F. Lim S.A.H. and Yusof, A. 2018. Piloting for interviews in qualitative research. *International Journal of Academic Research in Business and Social Sciences* 7(4), pp. 1073-1080. doi: 10.6007/IJARBSS/v7-i4/2916

Majumdar, A. 2022. Thematic analysis in qualitative research. In: *Research Anthology on Innovative Research Methodologies and Utilization Across Multiple Disciplines*, pp. 604–622. IGI Global.

Maloney, D., Freeman, G. and Wohn, G.Y. 2020. 'Talking without a voice': Understanding non-verbal communication in social virtual reality. *Proceedings of the ACM on Human-Computer Interaction* 4(CSCW2), pp. 1–25. doi: 10.1145/3415246.

Marshall, B., Cardon, P., Poddar, A. and Fontenot, R. 2013. Does sample size matter in qualitative research?: A review of qualitative interviews in IS research. *Journal of Computer Information Systems* 54(1), pp. 11–22. doi: 10.1080/08874417.2013.11645667

Martin, H.A. and Ciurzynski, S.M. 2015. Situation, background, assessment, and recommendation–Guided huddles improve communication and teamwork in the emergency department. *Journal of Emergency Nursing* 41(6), pp. 484–488. doi: 10.1016/ j.jen.2015.05.017

Martínez-Mesa, J., González-Chica, D.A., Duquia, R.P., Bonamigo, R.R. and Bastos, J.L. 2016. Sampling: How to select participants in my research study? *Anais brasileiros de dermatologia* 91, pp. 326–330. doi: 10.1590/abd1806-4841.20165254

Martins, J.C.A. et al. 2018. Communication and leadership in emergency situations: Systematic literature review and recommendations for practice. *Clinical Nursing Studies* 6(2), pp. 55–62. doi: 10.5430/cns.v6n2p55

Maslach, C. and Leiter, M.P. 2016. Understanding the burnout experience: recent research and its implications for psychiatry. *World Psychiatry* 15(2), pp. 103–111. doi: 10.1002/wps.20311

Mass, S.F. de L.S., Centenaro, A.P.F.C., dos Santos, A.F., de Andrade, A., Franco, G.P. and Cosentino, S.F. 2022. Routine of the unpredictable: Workloads and health of urgent and emergency nursing workers. *Revista Gaúcha de Enfermagem* 43. doi: 10.1590/1983-1447.2022.20210007

Maximin, S., Moshiri, M. and Bhargava, P. 2015. Understanding the cost of conflict and an approach to conflict-management design. *Journal of the American College of Radiology* 12(5), pp. 507–509. doi: 10.1016/j.jacr.2014.07.006

Mays, N. and Pope, C. 1995. Qualitative research: Rigour and qualitative research. *BMJ* 311(6997), pp. 109–112. doi: 10.1136/bmj.311.6997.109

Mazzocato, P., Hvitfeldt Forsberg, H. and von Thiele Schwarz, U. 2011. Team behaviors in emergency care: A qualitative study using behavior analysis of what makes team work. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 19(1), pp. 1–8. doi: 10.1186/1757-7241-19-70

McComb, S.A., Lemaster, L. Henneman, E. and Hinchey, K. 2017. An evaluation of shared mental models and mutual trust on general medical units: implications for collaboration, teamwork, and patient safety. *Journal of Patient Safety* 13(4), pp. 237–242. doi: 10.1097/PTS.0000000000000151

McCracken, G. 1988. *The Long Interview: Qualitative Research Methods.* London: SAGE Publishing.

McDermid, F., Mannix, J. and Peters, K. 2020. Factors contributing to high turnover rates of emergency nurses: A review of the literature. *Australian Critical Care* 33(4), pp. 390–396. doi: 10.1016/j.aucc.2019.09.002

McGrath, C., Palmgren, P.J. and Liljedahl, M. 2019. Twelve tips for conducting qualitative research interviews. *Medical Teacher* 41(9), pp. 1002–1006. doi: 10.1080/ 0142159X.2018.1497149

McMullin, C. 2021. Transcription and qualitative methods: Implications for third sector research. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations* 34, pp. 140-153. doi: 10.1007/s11266-021-00400-3

McWalter, P., AlKhenizan, A. and Ahmad, M. 2023. Hospital residents' perception of mentorship as influencing clinical leadership: a qualitative study using semi-structured interviews. *MedEdPublish* 13(8), p. 8.

Mears, C.L. 2012. In-depth interviews. In: Day, L.A, Hedges, L.V., Waring, M. and Coe, R. eds. *Research Methods and Methodologies in Education*. SAGE Publishing, pp. 170–176.

Merriam, S.B. and Tisdell, E.J. 2015. *Qualitative Research: A Guide to Design and Implementation*. San Francisco, CA: John Wiley & Sons.

Michtalik, H.J., Yeh, H-C, Pronovost, P.J. and Brotman, D.J. 2013. Impact of attending physician workload on patient care: A survey of hospitalists. *JAMA Internal Medicine* 173(5), pp. 375–377. doi:10.1001/jamainternmed.2013.1864

Miles, M.B., Huberman, A. M. and Saldaña, J. (2014). Qualitative data analysis: A methods sourcebook. 3rd ed. SAGE Publishing.

Mills, V. and Stothard, C. 2000. *Towards a research methodology for assessing army command team performance: A preliminary examination*. Defence Science and Technology Organization. Salisbury, Australia. Available at: https://apps.dtic.mil/sti/tr/pdf/ADA384190.pdf [Accessed: 14 May 2022].

Milton, J., Andersson, A.E, Åberg, N.D., Gillespie, B.M. and Oxelmark, L. 2022a. Healthcare professionals' perceptions of interprofessional teamwork in the emergency department: A critical incident study. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 30(1), p.46. doi: 10.1186/s13049-022-01034-0

Milton, J., Gillespie, B.M., Åberg, D., Andersson, A.E. and Oxelmark, L. 2022b. Interprofessional teamwork before and after organizational change in a tertiary emergency department: An observational study. *Journal of Interprofessional Care* 37(2), pp. 300-3011. doi: 10.1080/13561820.2022.2065250

Milton, J. 2022. *Interprofessional teamwork in the emergency department- Communication for patient safety*. PhD dissertation, University of Gothenburg, Sahlgrenska Academy.

Milton, J., Åberg, D., Andersson, A.E., Gillespie, B.M. and Oxelmark, L.2023. Patients' perspectives on care, communication, and teamwork in the emergency department. *International Emergency Nursing* 66,. doi: 10.1016/ j.ienj.2022.101238

Mitchell, P. et al. 2012. Core principles & values of effective team-based health care. *NAM Perspectives*. https://doi.org/10.31478/201210c

Moghadam, V.M. 2015. Women, work and family in the Arab region: Toward economic citizenship. *Doha International Family Institute Journal* 2013(1).doi: 10.5339/difi.2013.arabfamily.7

MOH. 2017. *Statistical Year Book*. Available at: https://www.moh.gov.sa/en/Ministry/ Statistics/book/Documents/Statistical-Yearbook-1438-Appendix.pdf [Accessed: 2 April 2020].

MOH. 2018. *Statistical Yearbook*. Available at: https://www.moh.gov.sa/en/Ministry/ Statistics/book/Documents/book-Statistics.pdf [Accessed: 15 December 2019].

MOH 2020. *E-Services: (Mawid) Service*. Available at: https://www.moh.gov.sa/en/eServices/ Pages/cassystem.aspx [Accessed: 6 January 2020].

MOH 2021. *Statistical Yearbook*. Available at: chrome-extension://efaidnbmnnnibpcajpcglclefindmkaj/https://www.moh.gov.sa/Ministry/Statistics/book/Documents/1Statistical-Yearbook-2021.pdf [Accessed: 7 April 2023].

Mohammed-Ibtisam, M.I. and Doka, G.M. 2018. Check list of flora and vegetation of Hafer Albatin region, northeastern Saudi Arabia. *MOJ Ecology and Environmental Science* 3(3), pp. 138–143. doi: 10.15406/mojes.2018.03.00078

Mohsin, M., Forero, R., Ieraci, S., Bauman, A.E. Young, L. and Nancy Santiano, N. 2007. A population follow-up study of patients who left an emergency department without being seen by a medical officer. *Emergency Medicine Journal* 24(3), pp. 175–179. doi: 10.1136/emj.2006.038679

Moon, K. and Blackman, D. 2014. A guide to understanding social science research for natural scientists. *Conservation Biology* 28(5), pp. 1167–1177. doi: 10.1111/cobi.12326

Morrow, S.L. 2005. Quality and trustworthiness in qualitative research in counselling psychology. *Journal of Counseling Psychology* 52(2), pp. 250-260. doi: 10.1037/0022-0167.52.2.250

Morse, J.M. 1995. *The Significance of Saturation*. Thousand Oaks, CA: SAGE Publishing.

Morse, J.M. and Coulehan, J. 2015. Maintaining confidentiality in qualitative publications. *Qualitative Health Research* 25(2). doi: 10.1177/1049732314563489

Moser, A. and Korstjens, I. 2018. Series: Practical guidance to qualitative research. Part 3: Sampling, data collection and analysis. *European Journal of General Practice* 24(1), pp. 9–18. doi: 10.1080/13814788.2017.1375091

Moskop, J.C., Sklar, D.P. Geiderman, J.M. Schears, R.M. and Bookman, K.J.. 2009. Emergency department crowding, part 1—concept, causes, and moral consequences. *Annals of Emergency Medicine* 53(5), pp. 605–611. doi: 10.1016/j.annemergmed.2008.09.019

Moussa, F.L. et al. 2022. Attitudes of critical care nurses towards teamwork and patient safety Ain Saudi Arabia: A descriptive cross-sectional assessment. *Healthcare* 10(10). doi: 10.3390/healthcare10101866

Muda, W.H.N.W., Libunao, W.H., Salleh, K.M. and Sulaiman, N. 2016. Developing a leadership capability for team leaders in the construction industry: NA concept for organizational success. *Journal of Technical Education and Training* 8(2).

Mueen Ahmed, K.K. and Dhubaib, B.E.A. 2011. Zotero: A bibliographic assistant to researcher. *Journal of Pharmacology and Pharmacotherapeutics* 2(4), pp. 304–305. doi: 10.4103/0976-500X.85940

Muhanna, A.M. 2021. *An investigation of radiographers' and radiologists' perceptions and attitudes towards extending the radiographers' role in mammography*. PhD Thesis, Cardiff University.

Munn, Z., Peters, M.D.J., Stern, C., Tufanaru, C., McArthur, A. and Aromataris, E. 2018. Systematic review or scoping review? Guidance for authors when choosing between a systematic or scoping review approach. *BMC Medical Research Methodology* 18(1), pp. 1–7. doi: 10.1186/s12874-018-0611-x

Munnangi, S., Dupiton, L., Boutin, A. and Angus, L.D.G. 2018. Burnout, perceived stress, and job satisfaction among trauma nurses at a level I safety-net trauma center. *Journal of Trauma Nursing* 25(1), pp. 4–13. doi: 10.1097/JTN.0000000000000335

Muntlin Athlin, Å, von Thiele Schwarz, U. and Farrohknia, N. 2013. Effects of multidisciplinary teamwork on lead times and patient flow in the emergency department: A longitudinal interventional cohort study. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 21.doi: 10.1186/1757-7241-21-76

Murphy, F.J. and Yielder, J. 2010. Establishing rigour in qualitative radiography research. *Radiography* 16(1), pp. 62–67. doi: 10.1016/j.radi.2009.07.003

Murphy, M., Curtis, K. and McCloughen, A. 2019. Facilitators and barriers to the clinical application of teamwork skills taught in multidisciplinary simulated Trauma Team Training. *Injury* 50(5), pp. 1147–1152.doi: 10.1016/j.injury.2019.01.026

Murphy, M.M., Edwards C.M., Seggie, J.Z.J. and Curtis, K. 2011. Emergency department trauma redesign in a level 1 trauma centre. *Australasian Emergency Nursing Journal* 14(1), pp. 50–58. doi: 10.1016/j.aenj.2010.10.003

Nancarrow, S. et al. 2012. *The impact of enhancing the effectiveness of interdisciplinary working.* National Institute of Health Research Service Delivery and Organisation Programme. Available at: https://www.academia.edu/download/41676517/SDO_FR_08-1819-214_V01.pdf [Accessed: 22 January 2024].

Napi, N.M., Zaidan, A.A., Zaidan, B.B., Albahri, O.S., Asalem, M.A. and Albahri, A.S. 2019. Medical emergency triage and patient prioritisation in a telemedicine environment: A systematic review. *Health and Technology* 9(5), pp. 679–700. doi: 10.1007/s12553-019-00357-w

Natow, R.S. 2020. The use of triangulation in qualitative studies employing elite interviews. *Qualitative Research* 20(2), pp. 160–173. doi: 10.1007/s12553-019-00357-w

Natvig, D. and Stark, N.L. 2016. A project team analysis using Tuckman's model of small-group development. *Journal of Nursing Education* 55(12), pp. 675–681. doi: 10.3928/01484834-20161114-03

Nawi, M.N.M., Lee, A., Kamar, K.A.M. and Hamid, Z. A. 2012. Critical success factors for improving team integration in Industrialised Building System (IBS) construction projects: The Malaysian case. *Malaysian Construction Research Journal* 10(1), pp. 44–62.

Newman, P.A. et al. 2015. Towards a science of community stakeholder engagement in biomedical HIV prevention trials: An embedded four-country case study. *PloS One* 10(8), p. e0135937. doi: 10.1371/journal.pone.0135937

Nguyen, L.G.T. and Pham, H.T. 2020. Factors affecting employee engagement at not-for-profit organizations: A case in Vietnam. *The Journal of Asian Finance, Economics and Business (JAFEB)* 7(8), pp. 495–507. /doi:10.13106/jafeb.2020.vol7.no8.495

Noble, H. and Smith, J. 2015. Issues of validity and reliability in qualitative research. *Evidence-Based Nursing* 18(2), pp. 34–35. doi: 10.1136/eb-2015-102054

Northouse, P.G. 2021. *Leadership: Theory and Practice*. SAGE Publishing.

Nowell, L.S. Norris, J.M., White, D.E. and Moules, N.J. 2017. Thematic analysis: Striving to meet the trustworthiness criteria. *International Journal of Qualitative Methods* 16(1). doi: 10.1177/1609406917733847

Nyashanu, M., Pfende, F. and Ekpenyong, M. 2020. Exploring the challenges faced by frontline workers in health and social care amid the COVID-19 pandemic: Experiences of frontline workers in the English Midlands region, UK. *Journal of Interprofessional Care* 34(5), pp. 655–661. doi: 10.1080/13561820.2020.1792425.

Obenrader, C., Broome, M.E., Yap, T.L. and Jamison, F. 2019. Changing team member perceptions by implementing TeamSTEPPS in an emergency department. *Journal of Emergency Nursing* 45(1), pp. 31–37. doi: 10.1016/j.jen.2018.08.006

Obiekwe, O., Mobolade, G.O. and Akinade, M.E. 2021. Team building and teamwork in organizations: Implications to managers and employees in work places. *International Journal of Management, Social Sciences, Peace and Conflict Studies* 11(4), pp. 261-274.

Ogbonnaya, C., Tillman, C.J. and Gonzalez, K. 2018. Perceived organizational support in health care: The importance of teamwork and training for employee well-being and patient satisfaction. *Group & Organization Management* 43(3), pp. 475–503. doi: 10.1177/1059601118767244.

Onsman, A. 2010. Dismantling the perceived barriers to the implementation of national higher education accreditation guidelines in the Kingdom of Saudi Arabia. *Journal of Higher Education Policy and Management* 32(5), pp. 511–519. doi: 10.1080/ 1360080X.2010.511123

Ozcan, P., Han, S. and Graebner, M.E. 2017. Single cases: The what, why, and how. In: Mir, R.A. and Jain, S. eds. *The Routledge Companion to Qualitative Research in Organization Studies.* Routledge, pp. 99-112.

Padela, A.I., Gunter, K., Killawi, A. and Heisler, M. 2012. Religious values and healthcare accommodations: Voices from the American Muslim community. *Journal of General Internal Medicine* 27(6), pp. 708–715. doi: 10.1007/s11606-011-1965-5

Paige, J.T., Garbee, D.D., Bonanno, L.S. and Kerdolff, K.E. 2021. Qualitative analysis of effective teamwork in the operating room (OR). *Journal of Surgical Education* 78(3), pp. 967–979. doi: 10.1016/j.jsurg.2020.09.019

Palaganas, E.C., Sanchez, M.C., Molintas, M.V.P. and Caricativo, R.D. 2017. Reflexivity in qualitative research: A journey of learning. *Qualitative Report* 22(2), pp.426-438. doi: 10.46743/2160-3715/2017.2552

Palinkas, L.A., Horwitz, S, M., Green, C.A., Wisdom, J.P. Duan, N. and Hoagwood, K.2015. Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research* 42, pp. 533–544. doi: 10.1007/s10488-013-0528-y

Parvaresh-Masoud, M., Cheraghi, M.A. and Imanipour. M. 2021. Workplace interpersonal conflict in prehospital emergency: Concept analysis. *Journal of Education and Health Promotion* 10. doi: 10.4103%2Fjehp.jehp_213_21

Pathak, V., Jena, B. and Kalra, S. 2013.Qualitative Research. *Perspectives in Clinical Research* 4(3), 192. doi: 10.4103/2229-3485

Patterson, B., Bayley, E.W., Burnell, K. and Rhoads, J. 2010. Orientation to emergency nursing: perceptions of new graduate nurses. *Journal of Emergency Nursing* 36(3), pp. 203–211. doi: 10.1016/j.jen.2009.07.006

Patterson, M.D., Geis, G.L., Falcone, R.A., LeMaster, T. and Wears, R.L. 2013. In situ simulation: Detection of safety threats and teamwork training in a high risk emergency department. *BMJ Quality & Safety* 22(6), pp. 468–477. doi: 10.1136/bmjqs-2012-000942

Patton, M.Q. 1999. Enhancing the quality and credibility of qualitative analysis. *Health Services Research* 34(5 Pt 2), pp. 1189-1208.

Patton, M.Q. 2014. *Qualitative Research & Evaluation Methods: Integrating Theory and Practice*. SAGE Publishing.

Pedersen, A.H.M., Rasmussen, K., Grytnes, R. and Nielsen, K.J. 2018. Collaboration and patient safety at an emergency department–A qualitative case study. *Journal of Health Organization and Management* 32(1), 25-38. doi: 10.1108/JHOM-09-2016-0174

Peters, M.D.J., Godfrey, C. M., Khalil, H., McInerney, P., Parker, D. and Baldini, D. 2015. Guidance for conducting systematic scoping reviews. *JBI Evidence Implementation* 13(3), pp. 141–146. doi:10.1097/XEB.0000000000000050

Petrosoniak, A. and Hicks, C.M. 2013. Beyond crisis resource management: new frontiers in human factors training for acute care medicine. *Current Opinion in Anesthesiology* 26(6), pp. 699–706. doi:10.1097/ACO.0000000000000007

Pfaff, K. and Markaki, A. 2017. Compassionate collaborative care: an integrative review of quality indicators in end-of-life care. *BMC Palliative Care* 16(1). doi: 10.1186/s12904-017-0246-4

Pines, J.M., Iyer, S., Disbot, M., Hollander, J.E., Shofer, F.S. and Datner, E.M. 2008. The effect of emergency department crowding on patient satisfaction for admitted patients. *Academic Emergency Medicine* 15(9), pp. 825–831. doi: 10.1111/j.1553-2712.2008.00200.x

Ployhart, R.E. and Vandenberg, R.J. 2010. Longitudinal research: The theory, design, and analysis of change. *Journal of Management* 36(1), pp. 94–120. doi: 10.1177/0149206309352110

Plummer, V. and Copnell, B. 2016. Collaboration between nurses and physicians in an Indonesian Emergency Department. *Australasian Emergency Nursing Journal* 19(2), pp. 82–89. doi: 10.1016/j.aenj.2016.04.001

Polit, D. and Beck, C.T. 2014. *Essentials of Nursing Research*. *Appraising Evidence for Nursing Practice*. Wolters Kluwer Health.

Post, C., De Smet, H., Uitdewilligen, S., Schreurs, B. and Leysen, J. 2022. Participative or directive leadership behaviors for decision-making in crisis management teams? *Small Group Research* 53(5), pp. 692–724. doi: 10.1177/10464964221087952

Price, S. and Reichert, C. 2017. The importance of continuing professional development to career satisfaction and patient care: meeting the needs of novice to mid-to late-career nurses throughout their career span. *Administrative Sciences* 7(2), p. 17. doi: 10.3390/admsci7020017

Probst, M.A. et al. 2017. Shared decisionmaking in the emergency department: A guiding framework for clinicians. *Annals of Emergency Medicine* 70(5), pp. 688–695. doi: 10.1016/j.annemergmed.2017.03.063

Propp, K.M., Apker, J., Ford, W.S.Z., Wallace, N., Serbenski, M. and Hofmeister, N. 2010. Meeting the complex needs of the health care team: Identification of nurse-team communication practices perceived to enhance patient outcomes. *Qualitative Health Research* 20(1), pp. 15–28. doi: 10.1177/1049732309355289

Pun, J.K., Matthiessen, C.M.I.M., Murray, K.A. and Slade, D. 2015. Factors affecting communication in emergency departments: doctors and nurses' perceptions of communication in a trilingual ED in Hong Kong. *International Journal of Emergency Medicine* 8(1), pp. 1–12. doi: 10.1186/s12245-015-0095-y

Pun, J.K., Chan, E.A., Murray, K.A., Slade, D. and Matthiessen, C.M.I.M. 2017. Complexities of emergency communication: clinicians' perceptions of communication challenges in a trilingual emergency department. *Journal of Clinical Nursing* 26(21–22), pp. 3396–3407. doi: 10.1111/jocn.13699

Putri, A. 2013. *Interdisciplinary teamwork in the emergency department: How does it work?* Available at:https://www.researchgate.net/publication/328410666_Interdisciplinary_Teamwork_in_the_Emergency_Department_How_Does_It_Work/ [Accessed: 18 June 2023].

Qu, S.Q. and Dumay, J. 2011. The qualitative research interview. *Qualitative Research in Accounting & Management* 8(3), pp. 238–264. doi: 10.1108/11766091111162070

Quintão, C., Andrade, P. and Almeida, F. 2020. How to improve the validity and reliability of a case study approach? *Journal of Interdisciplinary Studies in Education* 9(2), pp. 264–275. doi: 10.32674/jise.v9i2.2026

Qureshi, M.N. and AlRajhi, A. 2020. Challenge of COVID-19 crisis managed by emergency department of a big tertiary centre in Saudi Arabia. *International Journal of Pediatrics and Adolescent Medicine* 7(3), pp. 147–152. doi:10.1016/j.ijpam.2020.08.001

Rabøl, L.I., Andersen, M.L., Østergaard, D., Bjørn, B., Lilja, B. and Mogensen, T. 2011. Descriptions of verbal communication errors between staff. An analysis of 84 root cause analysis-reports from Danish hospitals. *BMJ Quality & Safety* 20(3), pp. 268–274. doi: 10.1136/bmjqs.2010.040238

Racaj, M. 2016. Defining the crisis and crisis management. *Proceedings of the international scientific conference Crisis management: challenges and prospective*. Skopje, Macedonia.

Rahman, R. 2020. The privatization of health care system in Saudi Arabia. *Health Services Insights* 13. doi: 10.1177/1178632920934497.

Rai, N. and Thapa, B. 2015. *A study on purposive sampling method in research*. Kathmandu: Kathmandu School of Law 5,

Raziq, A. and Maulabakhsh, R. 2015. Impact of working environment on job satisfaction. *Procedia Economics and Finance* 23, pp. 717–725. doi: 10.1016/S2212-5671(15)00524-9

Reay, G., Smith-MacDonald, L. Then, K.L., Hall, M., Rankin, J. 2020. Triage emergency nurse decision-making: incidental findings from a focus group study. *International Emergency Nursing* 48. doi: 10.1016/j.ienj.2019.100791

Reddy, M. and Spence, P.R. 2006. Finding answers: Information needs of a multidisciplinary patient care team in an emergency department. *AMIA Annual Symposium Proceedings*. Citeseer, pp. 649-653.

Redley, B., Botti, M., Wood, B. and Bucknall, T. 2017. Interprofessional communication supporting clinical handover in emergency departments: An observation study. *Australasian Emergency Nursing Journal* 20(3), pp. 122–130. doi: 10.1016/j.aenj.2017.05.003

Reeves, S., Lewin, S., Espin, S. and Zwarenstein, M. 2010. *Interprofessional Teamwork for Health and Social Care*. John Wiley & Sons.

Rehim, S.A., DeMoor, S., Olmsted, R. Dent, D.L. and Parker-Raley, J. 2017. Tools for assessment of communication skills of hospital action teams: a systematic review. *Journal of Surgical Education* 74(2), pp. 341–351. doi: 10.1016/j.jsurg.2016.09.008

Rehman, A.A. and Alharthi, K. 2016. An introduction to research paradigms. *International Journal of Educational Investigations* 3(8), pp. 51–59.

Rekonen, S. 2014. Face to face with ambiguity and diversity: dynamics of interdisciplinary team work in different phases of explorative new product development projects. *DS 81: Proceedings of NordDesign 2014,* Espoo, Finland 27-29th August 2014, pp. 252–261.

Repper, J. and Carter, T. 2011. A review of the literature on peer support in mental health services. *Journal of Mental Health* 20(4), pp. 392–411. doi: 10.3109/09638237. 2011.583947

Richardson, S.K., Ardagh, M.W., Morrison, R. and Grainger, P.C. 2019. Management of the aggressive emergency department patient: non-pharmacological perspectives and evidence base. *Open Access Emergency Medicine: OAEM* 11, pp. 271-290. doi: 10.2147/ OAEM.S192884

Riley, A.J. et al. 2023. Accelerated transformation programme for healthcare services: Structure, function and the lessons learnt. *BMJ Leader* 8(2), 1-9. doi: 10.1136/leader-2023-000851

Ritchie, J., Lewis, J., Nicholls, C.M. and Ormston, R. eds. 2013. *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. SAGE Publishing.

Rixon, S., Braaf, S., Williams, A., Liew, D. and Manias, E. 2015. Pharmacists' interprofessional communication about medications in speciality hospital settings. *Health Communication* 30(11), pp. 1065–1075. doi: 10.1080/10410236.2014.919697

Rodziewicz, T.L. and Hipskind, J.E. 2020. *Medical Error Prevention*. Treasure Island (FL): StatPearls Publishing.

Rolfe, G. 2006. Validity, trustworthiness and rigour: Quality and the idea of qualitative research. *Journal of Advanced Nursing* 53(3), pp. 304–310. doi: 10.1111/j.1365-2648.2006.03727.x

Rönnerhag, M., Severinsson, E., Haruna, M. and Berggren, I. 2019. A qualitative evaluation of healthcare professionals' perceptions of adverse events focusing on communication and teamwork in maternity care. *Journal of Advanced Nursing* 75(3), pp. 585–593. doi: 10.1111/jan.13864

Rowley, J. 2002. Using case studies in research. *Management Research News* 25(1), pp. 16–27. doi: 10.1108/01409170210782990

Rowley, J. 2012. Conducting research interviews. *Management Research Review* 35(3/4), pp. 260–271. doi: 10.1108/01409171211210154

Rule, P. and John, V.M. 2015. A necessary dialogue: Theory in case study research. *International Journal of Qualitative Methods* 14(4), 1609406915611575. doi: 10.1177/1609406915611575.

Rydenfält, C., Borell, J. and Erlingsdottir, G. 2018. 'What do doctors mean when they talk about teamwork? Possible implications for interprofessional care. *Journal of Interprofessional Care* 33(2), pp. 1-10. doi: 10.1080/13561820.2018.1538943

Sachdeva, S., Jamshed, N., Aggarwal, P. and Kashyap, S. R.2019. Perception of workplace violence in the emergency department. *Journal of Emergencies, Trauma, and Shock* 12(3), pp. 179-184. doi:10.4103/JETS.JETS_81_18

Sajjad, R. and Qureshi, M.O. 2020. An assessment of the healthcare services in the Kingdom of Saudi Arabia: An analysis of the old, current, and future systems. *International Journal of Healthcare Management* 13(sup1), pp. 109–117. doi: 10.1080/20479700.2018. 1433459

Salas, E., Rosen, M.A. and King, H. 2007. Managing teams managing crises: principles of teamwork to improve patient safety in the emergency room and beyond. *Theoretical Issues in Ergonomics Science* 8(5), pp. 381–394. doi: 10.1080/14639220701317764

Salas, E., Shuffler, M.L., Thayer, A.L. Bedwell, W.L. and Lazzara, E.H. 2015. Understanding and improving teamwork in organizations: A scientifically based practical guide. *Human Resource Management* 54(4), pp. 599–622. doi: 10.1002/hrm.21628

Saldaña, J. 2021. *The Coding Manual for Qualitative Researchers*. 4th ed. SAGE Publishing.

Saleh, U., O'Connor, T., Al-Subhi, H., Alkattan, R., Al-Harbi, S. and Patton, D. 2018. The impact of nurse managers' leadership styles on ward staff. *British Journal of Nursing* 27(4), pp. 197–203. doi: 10.12968/bjon.2018.27.4.197

Salonen, A.H., Kaunonen, M., Meretoja, R. and Tarkka, M-T. 2007. Competence profiles of recently registered nurses working in intensive and emergency settings. *Journal of Nursing Management* 15(8), pp. 792–800. doi: 10.1111/j.1365-2934.2007.00768.x

Samarakoon, K.B. 2019. Leadership styles for healthcare. *International Journal of Scientific and Research Publications* 9(9), 49-53. A doi: 10.29322/IJSRP.9.09.2019.p9308

Sandelowski, M. 1995. Sample size in qualitative research. *Research in Nursing & Health* 18(2), pp. 179–183. doi: 10.1002/nur.4770180211

Saudi Press Agency. 2020. *Prince of the Northern Borders Region launches health projects, at a total cost of 157 million riyals*. Available at: https://www.spa.gov.sa/viewfullstory. php?lang=ar&newsid=2038173 [Accessed: 1 April 2021].

Saudi Red Crescent Authority. 2013. *Saudi Red Crescent Authority. History of SRCA*. Available at: http://www.srca.org.sa/History.aspx [Accessed: 28 May 2020].

Saudi Vision 2030. 2016a. *MESSAGE FROM HRH PRINCE MOHAMMED BIN SALMAN BIN ABDULAZIZ AL-SAUD*. Available at: https://www.vision2030.gov. sa/en/vision/crown-message [Accessed: 2 December 2019].

Saudi Vision 2030. 2016b. *National Transformation Program.* Available at: https://vision2030.gov.sa/en/programs/NTP [Accessed: 12 February 2019].

Saunders, B., Kitzinger, J. and Kitzinger, C. 2015. Anonymising interview data: Challenges and compromise in practice. *Qualitative Research* 15(5), pp. 616–632. doi: 10.1177/1468794114550439

Saunders, M., Lewis, P. and Thornhill, A. 2009. *Research Methods for Business Students*. Pearson Education.

Savin-Baden, M. and Howell-Major, C. 2013. *Qualitative Research: The Essential Guide to Theory and Practice.* Routledge.

Scanlan, G.M., Cleland, J., Walker, K. and Johnston, P. 2018. Does perceived organisational support influence career intentions? The qualitative stories shared by UK early career doctors. *BMJ Open* 8(6), e022833. doi: 10.1136/bmjopen-2018-022833

Schilling, P.L., Campbell, D. A. Jr., Englesbe, M.J. and Davis, M. M. 2010. A comparison of in-hospital mortality risk conferred by high hospital occupancy, differences in nurse staffing levels, weekend admission, and seasonal influenza. *Medical Care*, 48(3), pp. 224–232. doi:10.1097/MLR.0b013e3181c162c0

Schmidt, M. and Haglund, K. 2017. Debrief in emergency departments to improve compassion fatigue and promote resiliency. *Journal of Trauma Nursing* 24(5), pp. 317–322. doi: 10.1097/JTN.0000000000000315

Schmutz, J. and Manser, T. 2013. Do team processes really have an effect on clinical performance? A systematic literature review. *British Journal of Anaesthesia* 110(4), pp. 529–544. doi: 10.1093/bja/aes513

Schmutz, J.B., Meier, L.L. and Manser, T. 2019. How effective is teamwork really? The relationship between teamwork and performance in healthcare teams: a systematic review and meta-analysis. *BMJ Open* 9(9). doi: 10.1136/bmjopen-2018-028280

Scotland, J. 2012. Exploring the philosophical underpinnings of research: Relating ontology and epistemology to the methodology and methods of the scientific, interpretive, and critical research paradigms. *English Language Teaching* 5(9), pp. 9–16. doi: 10.5539/elt.v5n9p9
Scott, C. and Gerardi, D. 2011. A strategic approach for managing conflict in hospitals: responding to the Joint Commission leadership standard, Part 1. *The Joint Commission Journal on Quality and Patient Safety* 37(2), pp. 59–69. doi: 10.1016/S1553-7250(11)37008-0

Scott, M. 2021. *A grounded theory study of interprofessional teamworking in the Operating Room: what makes a "great day" at work?* University of Northumbria at Newcastle (United Kingdom).

Seawright, J. and Gerring, J. 2008. Case selection techniques in case study research: A menu of qualitative and quantitative options. *Political Research Quarterly* 61(2), pp. 294–308. doi: 10.1177/1065912907313077

Sebok-Syer, S.S., Lingard, L., Panza, M., Van Hooren, T.A. and Rassbach, C.E. 2023. Supportive and collaborative interdependence: Distinguishing residents' contributions within health care teams. *Medical Education*, 57(10), pp. 921-931. medu.15064. doi: 10.1111/medu.15064.

Shankar, K.N., Bhatia, B.K. and Schuur, J.D. 2014. Toward patient-centered care: A systematic review of older adults' views of quality emergency care. *Annals of Emergency Medicine* 63(5), pp. 529–550. doi: 10.1016/j.annemergmed.2013.07.509

Shapiro, M.J. et al. 2004. Simulation based teamwork training for emergency department staff: does it improve clinical team performance when added to an existing didactic teamwork curriculum? *BMJ Quality & Safety* 13(6), pp. 417–421. doi: 10.1136%2Fqshc. 2003.005447

Sherman, J.M., Chang, T.P., Nurit, Z. and Nager, A.L. 2020. Barriers to effective teamwork relating to pediatric resuscitations: Perceptions of pediatric emergency medicine staff. *Pediatric Emergency Care* 36(3), pp. e146–e150. doi: 10.1097/PEC.0000000000001275

Shufutinsky, A. 2020. Employing use of self for transparency, rigor, trustworthiness, and credibility in qualitative organizational research methods. *OD Practitioner* 52(1), pp. 50–58.

Shumba, C.S., Kielmann, K. and Witter, S. 2017. Health workers' perceptions of private-not-for-profit health facilities' organizational culture and its influence on retention in Uganda. *BMC Health Services Research* 17(1), pp. 1–11. doi: 10.1186/s12913-017-2763-5

Siassakos, D. et al.. 2011a. Clinical efficiency in a simulated emergency and relationship to team behaviours: A multisite cross-sectional study. *BJOG: An International Journal of Obstetrics and Gynaecology* 118(5), pp. 596–607. doi:10.1111/j.1471-0528.2010.02843.x

Siassakos, D., Fox, R., Crofts, J.F., Hunt, L.P., Winter, C. and Draycott, T.J. 2011b. The management of a simulated emergency: Better teamwork, better performance. *Resuscitation* 82(2), pp. 203–206. doi: 10.1016/j.resuscitation.2010.10.029

Smith, J., Sears, N., Taylor, B. and Johnson, M. 2020. Serious games for serious crises: Reflections from an infectious disease outbreak matrix game. *Globalization and Health* 16(1), p,18. doi: 10.1186/s12992-020-00547-6

Smith, T., Cross, E., Booth, A., Ariss, S., Nancarrow, S., Enderby, P. and Blinston, A. 2012. *Interdisciplinary management tool-workboo*k. Southampton: National Institute of Health Research Service Delivery and Organisation Program. Available at: https://www.academia.edu/download/ 28448393/Interdisciplinary_Management_Tool.pdf [Accessed: 22 January 2024]

Sohmen, V.S. 2013. Leadership and teamwork: Two sides of the same coin. *Journal of IT and Economic Development* 4(2), pp. 1–18. doi: 10.13140/RG.2.1.4241.7766

Sosik, J.J., Juzbasich, J. and Chun, J. U. 2011. Effects of moral reasoning and management level on ratings of charismatic leadership, in-role and extra-role performance of managers: A multi-source examination. *The Leadership Quarterly* 22(2), pp. 434–450. doi: 10.1016/j.leaqua.2011.02.015

Spradley, J.P. 2016a. *Participant Observation*. Waveland Press.

Spradley, J.P. 2016b. *The Ethnographic Interview*. Waveland Press.

Stake, R.E. 1995. *The Art of Case Study Research*. London: SAGE Publishing

Stratton, S.J. 2019. Literature reviews: methods and applications. *Prehospital and Disaster Medicine* 34(4), pp. 347–349. doi: 10.1017/S1049023X19004588

Sultan, M.A.S., Khorram-Manesh, A., Sørensen, J.L., Berlin, J. and Carlström, E 2023. Disaster collaborative exercises for healthcare teamwork in a Saudi Context. *International Journal of Disaster Risk Science* 14(2), pp. 183–193. doi: 10.1007/s13753-023-00484-z.

Sun, C. and Zhai, Z. 2020. The efficacy of social distance and ventilation effectiveness in preventing COVID-19 transmission. *Sustainable Cities and Society* 62. doi: 10.1016/j.scs.2020.102390

Szalados, J.E. ed. 2021. *The medical-legal aspects of acute care medicine: A resource for clinicians, administrators, and risk managers*. Cham: Springer International Publishing.

Tannenbaum, S.I., Traylor, A.M., Thomas, E.J. and Salas, E. 2020. Managing teamwork in the face of pandemic: evidence-based tips. *BMJ Quality & Safety* 3-(1) doi: 10.1136/bmjqs-2020-011447

Tariq, J. and Gardezi, S.S.S. 2023. Study the delays and conflicts for construction projects and their mutual relationship: A review. *Ain Shams Engineering Journal* 14(1) . doi: 10.1016/j.asej.2022.101815

Taylor, C. and Albasri, W. 2014. The impact of Saudi Arabia King Abdullah's scholarship program in the US. *Open Journal of Social Sciences* 2(10). doi: 10.4236/jss.2014.210013

Tedla, B.A. and Hamid, A.S. 2022. Leadership in healthcare organizations: A retrospective study. *International Journal of Health Sciences* (III), pp. 733–746. doi:10.53730/ijhs.v6nS3.5427

The Joanna Briggs Institute. 2015. *Joanna Briggs Institute Reviewers' Manual*. Available at: https://nursing.lsuhsc.edu/JBI/docs/ReviewersManuals/Scoping-.pdf [Accessed: 23 August 2021].

The Joint Commission. 2017. *Sentinel Event Alert 58. Inadequate Hand-off Communication*. Available at: https://www.jointcommission.org/-/media/tjc/newsletters/sea-58-hand-off-comm-9-6-17-final2.pdf [Accessed: 18 August 2022].

The Joint Commission 2021. *Joint Commission International Accreditation Standards for Hospitals*. Available at: https://www.jointcommissioninternational.org/-/media/jci/jci-documents/ accreditation/hospital-and-amc/jci-errata-standards-only_7th-ed-hospital.pdf [Accessed:5 September 2022].

The Nations Online. 2022. *Map of Saudi Arabia, Middle East*. Available at: https://www.nationsonline.org/oneworld/map/saudi-arabia-map.htm [Accessed: 17 May 2023].

The Vision 2030. 2016. *Creating a Vision for All*. Available at: https://www.vision2030.gov.sa/v2030/creating-a-vision-for-all/ [Accessed: 19 May 2023].

The World Bank. 2022. *Saudi Women Are Taking on New Jobs with a Twist*. Available at: https://www.worldbank.org/en/news/feature/2022/03/02/saudi-women-are-taking-on-new-jobs-with-a-twist [Accessed: 19 May 2023].

Thorogood, N. and Green, J. 2018. *Qualitative Methods for Health Research*. SAGE Publishing.

Thurmond, V.A. 2001. The point of triangulation. *Journal of Nursing Scholarship* 33(3), pp. 253–258. doi: 10.1111/j.1547-5069.2001.00253.x

Tjan, T.E., Yong, L. Y. and Rixon, A. 2024. Conflict in emergency medicine: A systematic review. *Academic Emergency Medicine*, 31(6), pp 538-546. doi: 10.1111/acem.14874.

Tobin, G.A. and Begley, C.M. 2004. Methodological rigour within a qualitative framework. *Journal of Advanced Nursing* 48(4), pp. 388–396. doi: 10.1111/j.1365-2648.2004.03207.x

Tomic, M. and Tomic, E. 2011. Existential fulfilment, workload and work engagement among nurses. *Journal of Research in Nursing* 16(5), pp. 468–479. doi: 10.1177/ 1744987110383353

Tourangeau, A.N.N., Cranley, L., Spence Laschinger, H.K. and Pachis, J. 2010. Relationships among leadership practices, work environments, staff communication and outcomes in long-term care. *Journal of Nursing Management* 18(8), pp. 1060–1072. doi: 10.1111/j.1365-2834.2010.01125.x

Trinoskey, J., Cranley, L., Laschinger, H.K.S. and Pachis, J. 2009. Zotero: A product review. *Journal of Electronic Resources in Medical Libraries* 6(3), pp. 224–229. doi: 10.1111/j.1365-2834.2010.01125.x

Tripathy, M. 2018. Building quality teamwork to achieve excellence in business organizations. *International Research Journal of Management, IT and Social Sciences* 5(3), pp. 1–7. doi: 10.21744/irjmis.v5i3.662

Tubey, R.J., Rotich, J.K. and Bengat, J.K. 2015. Research paradigms. *Research on Humanities and Social Sciences* 5(5), pp. 224-228.

Tuckett, A.G. 2005. Part II. Rigour in qualitative research: Complexities and solutions. *Nurse Researcher* 13(1), pp. 24-42. /doi: 10.7748/nr2005.07.13.1.29.c5998

Tuckman, B.W. 1965. Developmental sequence in small groups. *Psychological Bulletin* 63(6), pp. 384-399. doi: 10.1037/h0022100

Tuckman, B.W. and Jensen, M.A.C. 1977. Stages of small-group development revisited. *Group & Organization Studies* 2(4), pp. 419–427. doi: 10.1177/105960117700200404

Turhan, N.S. 2019. Qualitative research designs: Which one is the best for your research? *European Journal of Special Education Research* 4(2), pp. 124-135.

Turner, C.J., Haas, B., Lee, C., Brar, S., Detsky, M.E. and Mumshi, L. 2018. Improving communication between surgery and critical care teams: Beyond the handover. *American Journal of Critical Care* 27(5), pp. 392–397. doi: 10.4037/ajcc2018114

Turney, M.A. 2017. *Tapping Diverse Talent in Aviation: Culture, Gender, and Diversity*. Routledge.

Ulrich, B. and Crider, N.M. 2017. Using teams to improve and performance. *Nephrology Nursing Journal* 44(2), pp. 141-151

Ulrich, B. and Kear, T. 2014. Patient safety culture in nephrology nurse practice settings: initial findings. *Nephrology Nursing Journal* 41(5), pp. 459–475.

Unified National Platform. 2019. *Health Care in KSA*. Available at: https://www.my.gov.sa/wps/portal/snp/aboutksa/HealthCareInKSA/!ut/p/z0/04_Sj9CPykssy0xPLMnMz0vMAfIjo8zivQN9DDycTAz9LZxCHQ0CA91MQyzMgo0NLEz0g1Pz9AuyHRUBpZYTgA!!/ [Accessed: 14 April 2020].

United Nations High Commissioner for Refugees, 2007. *UNHCR signs agreement with Saudi Red Crescent Society.* Available at: https://www.unhcr.org/46264e9e4.html [Accessed: 28 May 2020].

Vaida, S. and Șerban, D. 2021. Group development stages. A brief comparative analysis of various models. *Studia Universitatis Babes-Bolyai, Psychologia-Paedagogia* 66(1), pp. 91–110. doi: 10.24193/subbpsyped.2021.1.05

Vail, S.G. et al. 2023. Teamwork is associated with reduced hospital staff burnout at military treatment facilities: Findings from the 2019 Department of Defense patient safety culture survey. *The Joint Commission Journal on Quality and Patient Safety* 49(2), pp. 79–88. doi: 10.1016/j.jcjq.2022.11.004

Vaismoradi, M., Jones, J., Turunen, H. and Snelgrove, S. 2016. Theme development in qualitative content analysis and thematic analysis. *Journal of Nursing Education and Practice* 6(5), pp. 100-110. doi: 10.5430/jnep.v6n5p100

Van Knippenberg, D. 2017. Team innovation. *Annual Review of Organizational Psychology and Organizational Behavior* 4(1), pp. 211–233. doi:10.1146/annurev-orgpsych-032516-113240

Van Manen, M. 2017. But is it phenomenology? *Qualitative Health Research* 27(6), pp. 755-759. doi: 10.1177/1049732317699570

Varjoshani, N.J., Hosseini, M.A., Khankeh, H.R. and Fazlollah Ahmadi, F. 2015. Tumultuous atmosphere (physical, mental), the main barrier to emergency department inter-professional communication. *Global Journal of Health Science* 7(1), pp. 144-153. doi: 10.5539%2Fgjhs.v7n1p144

Vasileiou, K., Barnett, J., Thorpe, S. and Young, T. 2018. Characterising and justifying sample size sufficiency in interview-based studies: Systematic analysis of qualitative health research over a 15-year period. *BMC Medical Research Methodology* 18(1), pp. 1–18. doi: 10.1186/s12874-018-0594-7

Vieira, M. and Chinelli, F. 2013. Relação contemporânea entre trabalho, qualificação e reconhecimento: Repercussões sobre os trabalhadores técnicos do SUS [Contemporary relationship between work, qualification and reconfirmation: Repercussions on the technical workers of SUS]. *Ciência & Saúde Coletiva* 18, pp. 1591–1600. doi: 10.1590/S1413-81232013000600011

Canadian Centre For Occupational Health and Safety. 2016. *Violence in the workplace: OSH answers*. Available at: https://www.ccohs.ca/oshanswers/psychosocial/violence.html [Accessed: 18 July 2023].

Vu, M., Azmat, A., Radejko, T. and Padelo, A.I. 2016. Predictors of delayed healthcare seeking among American Muslim women. *Journal of Women's Health* 25(6), pp. 586–593. doi: 10.1089/jwh.2015.5517.

Wahyuni, D. 2012. The research design maze: Understanding paradigms, cases, methods and methodologies. *Journal of Applied Management Accounting Research* 10(1), pp. 69–80.

Walshe, C., Ewing, G. and Griffiths, J. 2012. Using observation as a data collection method to help understand patient and professional roles and actions in palliative care settings. *Palliative Medicine* 26(8), pp. 1048–1054. doi: 10.1177/0269216311432897

Walston, S., Al-Harbi, Y. and Al-Omar, B. 2008. The changing face of healthcare in Saudi Arabia. *Annals of Saudi Medicine* 28(4), pp. 243–250. doi: 10.5144/0256-4947.2008.243

Watson, A. G., McCoy, J.V., Mathew, J., Gundersen, D.A. and Eisenstein, R.M. 2019. Impact of physician workload on burnout in the emergency department. *Psychology, Health & Medicine* 24(4), pp. 414–428. doi: 10.1080/13548506.2018.1539236

Walumbwa, F.O., Avolio, B., Gardner, W., Wernsing, T. and Peterson, S. 2008. Authentic leadership: Development and validation of a theory-based measure. *Journal of Management* 34(1), pp. 89–126. doi: 10.1177/0149206307308913.

Weaver, A.L., Hernandez, S. and Olson, D.M. 2017. Clinician perceptions of teamwork in the emergency department: does nurse and medical provider workspace placement make a

difference? *JONA: The Journal of Nursing Administration* 47(1), pp. 50–55. doi 10.1097/NNA.0000000000000436

Weick, K.E. 1990. The vulnerable system: An analysis of the Tenerife air disaster. *Journal of Management* 16(3), pp. 571–593. doi: 10.1177/014920639001600304.

Weiss, M. and Hoegl, M. 2015. The history of teamwork's societal diffusion: A multi-method review. *Small Group Research* 46(6), pp. 589–622. doi: 10.1177/1046496415602778.

Weller, J., Boyd, M. and Cumin, D. 2014. Teams, tribes and patient safety: Overcoming barriers to effective teamwork in healthcare. *Postgraduate Medical Journal* 90(1061), pp. 149–154. doi: 10.1136/postgradmedj-2012-131168

Welp, A., Meier, L.L. and Manser, T. 2016. The interplay between teamwork, clinicians' emotional exhaustion, and clinician-rated patient safety: A longitudinal study. *Critical Care* 20(1). doi: 10.1186/s13054-016-1282-9

West, M.A. et al. 2002. The link between the management of employees and patient mortality in acute hospitals. *The International Journal of Human Resource Management* 13(8), pp. 1299–1310. doi: 10.1080/09585190210156521.

West, M.A. and Chowla, R. 2017. Compassionate leadership for compassionate health care. In: West, M.A. and Chowla, R. eds. *Compassion: concepts, research and applications.* London: Routledge, pp. 237–257.

West, M.A. and Lyubovnikova, J. 2013. Illusions of team working in health care. *Journal of Health Organization and Management* 27(1), pp. 134–142. doi: 10.1108/14777261311311843

Westli, H.K., Johnsen, B.H., Eid, J. Rasten, I. and Brattebø, G. 2010. Teamwork skills, shared mental models, and performance in simulated trauma teams: an independent group design. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine* 18(1), pp. 1–8. doi: 10.1186/1757-7241-18-47

Whipple, R. 2012. *Favoritism is a huge problem*. Available at: https://leadergrow.com/articles/favoritism-is-a-huge-problem [Accessed: 18 May 2021].

White, C.H., Meier, N. and Swint, C. 2021. The implementation of a stress management program for health care workers through a rural occupational health clinic. *Workplace Health & Safety* 69(4), pp. 161–167. doi: 10.1177/2165079920982406

Wildman, J.L., Thayer, A.L., Pavlas, D., Salas, E., Steward, J.E. and Howse, William, R. 2012. Team knowledge research: Emerging trends and critical needs. *Human Factors* 54(1), pp. 84–111. doi: 10.1177/0018720811425365

Williamson, K. 2006. Research in constructivist frameworks using ethnographic techniques. *Library Trends* 55(1), pp. 83–101. doi: 10.1353/lib.2006.0054

Willig, C. 2019. Ontological and epistemological reflexivity: A core skill for therapists. *Counselling and Psychotherapy Research* 19(3), pp. 186–194. doi: 10.1002/ capr.12204

Wilson, S., Hartanto, S., White, P. and Judkins, S. 2020. Systematic literature review of leadership in emergency departments. *Emergency Medicine Australasia* 32(6), pp. 935–952. doi: 10.1111/1742-6723.13658

Wilson, V. 2014. *Research Methods: Triangulatio*n. doi: 10.18438/ B8WW3X

Wise, S., Duffield, C., Fry, M. and Roche, M 2020. Clarifying workforce flexibility from a division of labor perspective: A mixed methods study of an emergency department team. *Human Resources for Health* 18(1), p. 17. doi: 10.1186/s12960-020-0460-7

Wise, S., Duffield, C., Fry, M. and Roche, M. 2021. A team mental model approach to understanding team effectiveness in an emergency department: A qualitative study. *Journal of Health Services Research & Policy* 27(1), pp 14-21. doi:10.1177/13558196211031285.

Wise, S., Duffield, C., Fry, M. and Roche, M. 2022. Nurses' role in accomplishing interprofessional coordination: Lessons in 'almost managing' an emergency department team. *Journal of Nursing Management* 30(1), pp. 198–204. doi: 10.1111/jonm.13464.

Wong, A.H., Wing, L., Weiss, B. and Gang, M. 2015. Coordinating a team response to behavioral emergencies in the emergency department: A simulation-enhanced interprofessional curriculum. *Western Journal of Emergency Medicine* 16(6), pp. 859-865. doi: 10.5811/westjem.2015.8.26220

Xie, Z. and Or, C. 2017. Associations between waiting times, service times, and patient satisfaction in an endocrinology outpatient department: A time study and questionnaire survey. *INQUIRY: The Journal of Health Care Organization, Provision, and Financing* 54, Article 0046958017739527.

Xu, J.-H. 2017. Leadership theory in clinical practice. *Chinese Nursing Research* 4(4), pp. 155–157. doi: 10.1016/j.cnre.2017.10.001

Xyrichis, A., Reeves, S. and Zwarenstein, M. 2017. Examining the nature of interprofessional practice: An initial framework validation and creation of the InterProfessional Activity Classification Tool (InterPACT). *Journal of Interprofessional Care* 32(4), pp. 416–425. doi: 10.1080/13561820.2017.1408576

Xyrichis, A. and Ream, E. 2008. Teamwork: A concept analysis. *Journal of Advanced Nursing* 61(2), pp. 232–241. doi: 10.1111/j.1365-2648.2007.04496.x

Yaghmaei, S., Raiesdana, N. and Nobahar, M. 2022. Novice nurses' experiences from teamwork in the emergency department: A qualitative content analysis. *International Emergency Nursing* 61. doi: 10.1016/j.ienj.2021.101116

Yardley, J. 2014. Team dynamics: The role it plays in shaping service delivery. *Nursing and Residential Care* 16(5), pp. 284–286. doi: 10.12968/nrec.2014.16.5.284

Yelland, J. et al. 2016. Compromised communication: A qualitative study exploring Afghan families and health professionals' experience of interpreting support in Australian maternity care. *BMJ Quality & Safety* 25(4), pp. e1–e1. doi: 10.1136/bmjqs-2014-003837

Yin, R.K. 2003. *Case Study Research*: *Design and Methods*. 3rd ed. Thousand Oaks, California: SAGE Publishing.

Yin, R.K 2009. *Ca Case Study Research*: *Design and Methods*. 4th ed. Thousand Oaks, California: SAGE Publishing.

Yin, R.K. 2013. *Case Study Research*: *Design and Methods. Thousand* Oaks, California: SAGE Publishing.

Yin, R.K. 2014. *Case Study Research*: *Design and Methods*. 5th ed. Thousand Oaks, California: SAGE Publishing.

Yin, R.K. 2018. *Case Study Research and Applications*: *Design and Methods* 6th ed. Thousand Oaks, California: SAGE Publishing.

Yip, C., Han, N-L. R. and Sng, B.L. 2016. Legal and ethical issues in research. *Indian Journal of Anaesthesia* 60(9), pp. 684-688. doi: 10.4103/0019-5049.190627

Yunus, N.A., Hartman, T.O. and Sturgiss, E. 2022. Reporting of the translation process in qualitative health research: A neglected importance. *International Journal of Qualitative Methods* 21. doi: 10.1177/16094069221145282

Zahedi, F. et al. 2013. The code of ethics for nurses. *Iranian Journal of Public Health* 42(Supple1), pp. 1-8.

Zainal, Z. 2007. Case study as a research method. *Jurnal Kemanusiaan* 5(1), pp. 1-7.

Zajac, S., Woods, A., Tannenbaum, S., Salas, E. and Holladay, C.L. 2021. Overcoming challenges to teamwork in healthcare: A team effectiveness framework and evidence-based guidance. *Frontiers in Communication* 6. doi:10.3389/fcomm. 2021.606445

Zawawi, A.N. and Al-Rashed, A.M. 2020. The experiences of foreign doctors in Saudi Arabia: A qualitative study of the challenges and retention motives. *Heliyon* 6(8). doi: 10.1016/j.heliyon.2020.e03901

Zincirkiran, M., Emhan, A. and Yasar, M.F. 2015. Analysis of teamwork, organizational commitment and organizational performance: A study of health sector in Turkey. *Asian Journal of Business and Management* 3(2), pp. 173-182.

Appendices

Appendix 1: Summary of the Literature

S/N	Author(s)/Title Year	Methodology/Methods	Country	Study Focus	Findings
1	Grover et al. (2017). An exploration of emergency nurses' perceptions, attitudes and experience of teamwork in the emergency department.	Qualitative Study A descriptive, exploratory approach and semi-structured interviews were conducted with (12) RNs.	Australia	To explore emergency nurses' perceptions, attitudes, and teamwork experiences in the ED.	Three major themes emerged from the data. The first theme 'when teamwork works' supported the notion that emergency nurses perceived teamwork as a positive and effective construct in four key areas: resuscitation, simulation training, patient outcomes and staff satisfaction. The second theme, 'team support,' revealed that backup behaviour and leadership were critical elements of team effectiveness within the study setting. The third theme, 'no time for teamwork,' centred around periods when teamwork practices failed due to various contributing factors, including inadequate resources and skill mix.
2	Weaver et al. (2017). Clinician perceptions of teamwork in the emergency department.	Quantitative Study A prospective, self-administered pre-survey-post-survey utilising the	US	To determine whether positioning ED physicians,	There was a statistically significant improvement in the total TPQ scores ($p = .0009$) and 4 of the 5 components of the TPQ: team

		TeamSTEPPS Teamwork Perceptions Questionnaire (TPQ)		physician assistants, and nurse practitioners at the same workstations as registered nurses (RNs) improved communication and teamwork.	structure (p = .0283), situation monitoring (p = .0006), mutual support p = .0001), and communication (p = .0001). There was no change in the leadership component (p = .4519).
3	Ajeigbe et al. (2013). Nurse-physician teamwork in the emergency department.	Quantitative Study This was a comparative cross-sectional study of the impact of teamwork on perceptions of job environment, autonomy, and control over the practice by registered nurses and physicians (MDs) in emergency departments. This study was conducted in four hospitals and 8 participants from each hospital.	US	To examine differences between staff in the interventional group EDs (BEDs) and control group EDs (SHEDs) on the perception of job environment, autonomy, and control over the practice	Staff in the interventional group EDs showed significant differences compared with those in control group EDs regarding staff perception of job environment, autonomy, and control over practice.
4	Ajeigbe et al. (2014). Effect of nurse-physician teamwork in the emergency department nurse and physician perception of job satisfaction.	Quantitative Study This was a comparative cross-sectional quasi-interventional study of the effects of emergency room nurse-physician teamwork	US	To compare nurses and physicians (staff) who worked in the interventional group emergency	Staff members who worked in the interventional group EDs showed significantly higher levels of staff job satisfaction associated with improved practice of teamwork ($p<0.0001$) than their counterparts

		on the interventional group ED staff with the staff who worked in the control group EDs. Data were collected over 3 years (2009-2011) for 7 day period from nurses (433) and physicians (105) in each participating hospital ED using the Revised Nurse Work Index, a four-point (1 to 4) Likert-type scaled instrument.		departments and those who worked in the control group EDs on the impact of teamwork on staff job satisfaction.	who worked in the control group EDs who had no practice of teamwork.
5	Lapierre et al. (2019). Factors affecting interprofessional teamwork in emergency department care of polytrauma patients: Results of an exploratory study.	Qualitative Study Data were collected from a sample of 7 health professionals (a nurse, a respiratory therapist, an emergency physician, a head nurse assistant, an emergency nurse advisor, a paramedic, and an orderly) who were involved in the care of polytrauma patients through individual semi-structured interviews and a focus group. The second phase carried out two structured observations of polytrauma patient care.	Canada	To better understand interprofessional teamwork (IPT) from the perspective of health professionals in ED care of polytrauma patients, specifically by identifying factors that facilitate and impede IPT.	Five broad categories: individual, relational, processual, organizational and contextual.

6	Kilner and Sheppard (2010). The role of teamwork and communication in the emergency department: A systematic review.	A Systematic Review Searches were conducted using CINAHL, Academic Search Premier, Scopus, Cochrane, PEDro, Medline, Embase, Amed and PubMed. This study review identified 14 eligible studies, all of mid-range quality.	Literature Review	To develop a systematic review using international research to describe the role of teamwork and communication in the emergency department and its relevance to physiotherapy practice in the emergency department.	This systematic review found that the studies demonstrated high levels of staff satisfaction with teamwork training interventions and positive staff attitudes towards the importance of teamwork and communication.
7	Khademian et al. (2013).Teamwork improvement in emergency trauma departments.	Qualitative Study Using purposive sampling, eleven nurses and six supervisors were recruited from the EDs of a newly established trauma centre. Data were generated utilising two focus groups and six in-depth individual interviews and analysed using qualitative content analysis.	Iran	To explore interprofessional teamwork and its improvement strategies in trauma emergency departments.	Interprofessional teamwork attributes and development strategies emerged in three key themes: team, context, and goal. These were categorised as the effective presence of team members, role definition in a team framework, managerial and physical context, effective patient management, and overcoming competing objectives.
8	Kalisch et al. (2010). Nursing staff teamwork and job satisfaction	Quantitative Study This was a cross-sectional study with a sample of 3,675	US	To explore the influence of unit characteristics,	Participants' levels of job satisfaction with their current position and satisfaction with their

		nursing staff from five hospitals and 80 patient care departments. Participants completed the Nursing Teamwork Survey.		staff characteristics and teamwork on job satisfaction with current position and occupation.	occupation were both higher when they rated their teamwork higher ($p < 0.001$) and perceived their staffing as adequate ($p < 0.001$). The type of department influenced both satisfaction variables ($p < 0.05$). In addition, education, gender and job title impacted satisfaction with occupation ($p < 0.05$) but not with their current position.
9	Jones et al. (2013). Creating a culture of safety in the emergency department.	Quantitative Study An independent sample comparison study with a quantitative design was carried out with 70 staff members (physicians, registered nurses (RNs), medical assistants, and ED technicians) who received teamwork training (Team STEPPS). Post-training perceptions were measured using the Agency for Healthcare Research and Quality's patient safety culture survey.	US	To determine if teamwork training improved employees' perception of the culture of safety in the emergency department.	Teamwork training skills can positively develop staff perception related to a safety culture among emergency department staff members.
10	Dreher-Hummel et al. (2021). The challenge of interprofessional collaboration in emergency department	Qualitative Study Semi-structured interviews were conducted with seven	Switzerland	To explore emergency nurses' and	'Negotiating collaboration' was developed as the key theme. Three subthemes that influenced the

	team triage – An interpretive description.	nurses and five physicians. Transcripts were analysed via Interpretive Description from September 2016 to May 2017		physicians' experience of collaboration and collective decision-making when triaging older Emergency Department patients within the interprofessional team triage system.	negotiation process have emerged: Participants described different opinions on how an optimal triage system should function ('preferences for triage systems'); they had conflicting perceptions of each profession's role ('role perceptions') and expressed different coping strategies about 'perceived time pressure.' The similarity of participants' views on these sub-themes determined whether the nurse and physician could successfully negotiate their collaboration. These themes became more apparent when the team triaged older ED patients.
11	Redley et al. (2017). Interprofessional communication supporting clinical handover in emergency departments: An observation study.	Qualitative Study Observation of 66 change-of-shift handovers at two acute hospital EDs in Australia. Focus groups with 34 nurses complemented the observations. Data were analysed via content and thematic methods.	Australia	To recognise and describe patterns and processes of interprofessional communication impacting the quality of ED change-of-shift handovers.	Four structural components of ED handover processes appeared: (1) Antecedents, (2) Behaviours and interactions, (3) Content, and (4) Delegation of ongoing care. Unusual and ad hoc interprofessional communication and discipline-specific handover content and processes emerged as particular risks to patient safety at change-of-shift handovers. Three themes related to risky and efficient practices to promote

					interprofessional communications across the four stages of ED handovers emerged: 1) standard processes and practices, 2) teamwork and interactions and 3) communication activities and practices.
12	Grover et al. (2017). An exploration of emergency nurses' perceptions, attitudes and experience of teamwork in the emergency department.	Qualitative Study A descriptive, exploratory approach and semi-structured interviews were conducted with (12) RNs.	Australia	Identifying the perceptions, attitudes, and teamwork experiences of emergency nurses in the ED.	From the data, three main themes emerged. First, emergency nurses perceived teamwork as a positive and effective construct in four key areas: resuscitation, simulation training, patient outcomes, and staff satisfaction. In the second theme, 'team support,' backup behaviour and leadership were critical to team effectiveness. Thirdly, “no time for teamwork” focused on periods of failure in teamwork practices due to insufficient resources and skill mix.
13	Plummer and Copnell (2016). Collaboration between nurses and physicians in an Indonesian emergency department	Quantitative Study This comparative study used a modified Jefferson Scale of Attitude towards physician and nurse collaboration. Data were collected from 47 nurses and 24 physicians from one of 25 general hospitals in	Indonesia	To examine nurses' and physicians' attitudes towards collaboration in the Emergency Department in the Indonesian context.	This study found that nurses had significantly more positive attitudes towards collaboration than physicians ($p<0.001$). Emergency nurses had significantly higher scores in three of four domains of the instrument, "physician dominance," "nurse autonomy," and "caring as opposed to curing.”

		Indonesia using an anonymous survey.			In addition, this study found that experience in the ED was significantly related to participants' attitudes towards collaboration (p=0.023).
14	Keshmiri and Moradi (2020). Perceptions of Iranian emergency department directors of interprofessional leadership: An interview study.	Qualitative Study Interviews with 15 healthcare team directors, 12 emergency medicine specialists and three nursing directors.	Iran	To explore the viewpoints of Iranian healthcare team directors regarding factors that are influential in leading an interprofessional team in the EDs.	The study found that factors that affected the development of interprofessional collaboration in the Iranian ED were the development and support of leadership at the team and organisational levels and the implementation of staff development strategies at the individual and team levels.
15	Hai-ping et al. (2020). Emergency medical staff's perceptions on cultural value difference-based teamwork issues: A phenomenological study in China	Qualitative Study Interviews with 10 doctors and 10 nurses.	China	To explore how different cultural values are linked to teamwork between doctors and nurses in the EDs in China.	Cultural values have influenced the practice of teamwork between doctors and nurses in EDs.
16	Obenrader et al. (2019). Changing Team member perceptions by Implementing TeamSTEPPS in an emergency department.	Quantitative Study The researchers applied a quality improvement project that trained 57 ED staff members utilising the TeamSTEPPS training programme. Forty-six participants completed	US	To enhance communication and the team's perceptions of communication among ED staff members.	The study found that the TeamSTEPPS training improved the staff's perceptions of teamwork and communication.

		assessments at all 3-time points (baseline, two weeks and one month): Team STEPPS Teamwork Perceptions and Attitudes Questionnaires and The Nursing Culture Assessment Tool.			
17	Sherman et al. (2020). Barriers to effective teamwork relating to pediatric resuscitations: Perceptions of pediatric emergency medicine staff.	Mixed Method Study Survey questions were developed to measure the construct of barriers and best practices among resuscitation team members (physicians, nurses, respiratory technicians, PED technicians, and PED pharmacists). The researchers coalesced nine core themes related to resuscitation teamwork using affinity diagramming from the participants' data.	US	To describe and understand the perceived barriers to effective communication and teamwork among different disciplines forming spontaneous resuscitation teams at a tertiary urban pediatric ED and to identify if providers of different.	One hundred twenty-five respondents (62% response rate) provided 893 coded statements. The main theme of communication was closed-loop communication. However, no differences in the proportion of themes represented were viewed by the ED staff of different roles ($p = 0.18$). There was a significant impact from the key theme ($p = 0.002$, partial $\eta 2 = 0.13$), with the highest priority on team leader performance (mean points of $5 = 2.5 \pm 1.9$), but neither effect nor interaction with role ($p = 0.6$, $p = 0.7$).
18	Liu et al. (2019). Interprofessional teamwork versus fast track streaming in an emergency department-An observational cohort study of two	Quantitative Study This is an analytic observational cohort study. Eleven thousand five	Sweden	This study compares two strategies, interprofessional	Likewise, the median length of stay for orthopaedic presentations was also shorter in the teamwork period, 217.0 min versus 230.0 min

	strategies for enhancing the throughput of orthopedic patients presenting limb injuries or back pain.	hundred seventy-three orthopaedic presentations were included in the fast track period and 10,978 in the teamwork period.		teams versus fast-track streaming, for orthopedic patients with limb injuries or back pain, the most frequent orthopedic health issues in an ED.	(-13.0 min, 95% CI: -18.0 to -8.0), and the adjusted LOS was 22.8 min shorter (95% CI: -26.9 to -18.7). For non-orthopaedic presentations, the crude median LOS did not differ significantly between the periods (2.0 min, 95% CI: -3.0 to 7.0). Nevertheless, the adjusted length of stay was shorter in the teamwork period (-20.1 min, 95% CI: -24.6 to -15.7).
19	Boiko et al. (2021). Interprofessional barriers in patient flow management: an interview study of the views of emergency department staff involved in patient admissions.	Qualitative Study Nineteen interviews were conducted with hospital staff in an acute tertiary trauma centre hospital.	UK	To consider the role of interprofessional barriers, defined as suboptimal ways of working, as perceived by ED staff in patient flow management.	The key themes found are ED teamworking barriers (substituting down and chasing and haphazard oversight), performance-driven coordination barriers (target pressure, hospital-wide escalation and fragmented bed management), and referral-related collaborative barriers (referral conflicts, mediating complex cases, and tribalism).
20	Athlin et al. (2013). Effects of multidisciplinary teamwork on lead times and patient flow in the emergency department: a longitudinal interventional cohort study.	Quantitative Study The study was conducted in an ED of a university hospital. The study has a longitudinal, non-randomized intervention study design.	Sweden	To study the effects of teamwork in an ED on lead times and patient flow.	A total of 1,838 patient visits were included. Findings demonstrated that the number of patients handled within teamwork time was almost equal between the different study periods. At the last follow-up, the median time to the physician was significantly decreased by 11

					minutes (p = 0.0005) compared to the control phase, and the total visit time was significantly faster at the last follow-up compared to the control phase (p = <0.0001; 39 minutes shorter on average). Ultimately, the 4-hour object was met in 71% in the last follow-up compared to 59% in the control phase (p = 0.0005).
21	Albrithen and Yalli (2015). Medical Social Workers' Perceptions Related to Interprofessional Teamwork at Hospitals	Quantitative Study In a survey of 219 social workers, researchers asked about their teamwork, communication, and role within hospitals.	KSA	To understand the difficulties they face when seeking to collaborate as part of a larger healthcare team.	In addition, they had difficulty communicating with colleagues from other countries due to language and cultural barriers. Social workers were, however, eager to educate others about what they do to improve teamwork.
22	Calder et al. (2017). Team communication patterns in emergency resuscitation: A mixed methods qualitative analysis.	Mixed Methods Observational Study At a tertiary care academic trauma centre: (1) interviews; (2) simulated resuscitation observations; and (3) live resuscitation observations were employed. Eighteen interviewed resuscitation team members about shared mental models, roles and goals of team members and	Canada	To understand how teams communicate during resuscitation, specifically to assess for a shared mental model (organised understanding of a team's relationships) and information	Resuscitation team members described a shared mental model. Respondents understood the roles and goals of each team member to provide rapid, efficient and life-saving care with an overall need for situational awareness. The information flow described in the interviews was reflected during the simulated and live resuscitations, with the most responsible physician and charting nurse being central to team communication. The

		procedural expectations. Thirty observed simulated resuscitation video recordings and documented the timing, source and destination of communication and the information category.		needs.	researchers consolidated communicated information into six categories: (1) time, (2) patient status, (3) patient history, (4) interventions, (5) assistance and consultations, and (6) team members present.
23	Martin and Ciurzynski (2015). Situation, background, assessment, and recommendation-Guided huddles improve communication and teamwork in the emergency department.	Quantitative Study The performance-improvement project occurred in an academic medical centre's pediatric ED in New York State from 2013 to 2014. The sample consisted of 34 nurses.	US	To improve communication, teamwork, and registered nurse job satisfaction in a paediatric ED, a performance-improvement (PI) project was instituted, followed by a huddle standardised with the situation, background, assessment, and recommendation (SBAR) framework.	83% of patient encounters included a joint evaluation. A huddle structured with SBAR was conducted 86% of the time. RNs and nurse practitioners verbalised patients' treatment plans in 89% and 97% of cases, respectively. Enhanced teamwork, communication, and nursing satisfaction levels were demonstrated among the nurse practitioners and RNs.
24	Bhanja et al. (2022). Team and leadership factors and their relationship to burnout in emergency medicine during	Quantitative Study In 2020 and 2021, researchers surveyed	US	To examine the relationship between team and	A total of 328, 356, and 260 responses were received in the three survey waves, with an

	COVID-19: A 3-wave cross-sectional study.	emergency medicine staff at two California hospitals. The study examined team dynamics, leadership qualities, and burnout, analysing how these factors relate.		leadership attributes and clinician burnout throughout the COVID-19 pandemic.	average response rate of about 50%. Clear processes, teamwork, and supportive leadership consistently linked to lower burnout in every survey round.
25	Liu et al. (2019). Can interprofessional teamwork reduce patient throughput times? A longitudinal single-centre study of three different triage processes at a Swedish emergency department.	Quantitative Study Adult ED of a Swedish urban hospital. Participants were patients arriving on weekdays from 08:00 to 21:00 for three 1-year periods from May 2012 to November 2015. A total of 185,806 patients were included. Interventions Senior physicians replaced triage nurses from May 2013 to May 2014, and interprofessional teamwork replaced the triage process.	Sweden	To identify the effect on the ED throughput times and proportion of patients who leave without being seen by a physician of two triage interventions, where comprehensive nurse-led triage was first replaced by a senior physician-led triage and then by interdisciplinary teamwork.	The median length of stay was shortest for teamwork, 228 min (95% CI 226.4 to 230.5) compared with 232 min (95% CI 230.8 to 233.9) for nurse-led and 250 min (95% CI 248.5 to 252.6) for physician-led triage. The adjusted LOS for the teamwork period was 16 minutes shorter than for nurse-led triage and 23 minutes shorter than for physician-led triage.
26	Donelan et al. (2020). Physician and nurse practitioner roles in emergency, trauma, critical, and intensive care.	Quantitative Study Eight hundred fourteen clinicians (351 NPs and 463 MDs) were recruited from a	US	To explore differences in perceived roles and	55% of NPs and 82% of MDs agree that their responsibilities in their department are clear ($p < .001$); 34% of MDs and 42% of NPs agree

		national population by postal mail survey.		responsibilities of NPs and Doctor of Medicine (MDs) practising in emergency, trauma, critical, and intensive care.	that their department is an example of excellent teamwork among staff members (p = 0.021); 41% of MD and 37% of NP clinicians (p = 0.061) agree that their teams are "prepared to provide outstanding care in a crisis or disaster." Perceived role clarity was significantly associated with increased perceptions of excellent practice of teamwork and disaster readiness.
27	(Gharaveis et al. 2023). How Visibility May Reduce Security Issues in Community Hospitals' Emergency Departments.	Qualitative Study fUsing semi-structured one-on-one interviews with 17 clinical staff and 48 hours of field observations in five EDs.	US	This study aimed to investigate the impact of visibility on teamwork, collaborative communication, and security problems in an ED.	High visibility influences productivity and efficiency of teamwork and communication and increases the risk of lowering security issues.
28	Mazzocato et al. (2011). Team behaviours in emergency care: a qualitative study using behaviour analysis of what makes teamwork.	Qualitative Study Three days of structured observations.	Sweden	Utilise behaviour analysis to explore the differences between the planned teamwork process and actual team	In this study, the main behaviours found were taking patient history together, gathering in a defined team room, and communicating with each other. When these behaviours were performed, the staff members could continuously work together during the care

				behaviours and investigate discrepancies between them.	episode.
29	Flowerdew et al. (2012). Teams under pressure in the emergency department: An interview study.	Qualitative Study Semi-structured interviews were conducted with 22 staff members. Data were collected from staff working in the ED of a London teaching hospital. A purposive sampling technique was used to recruit	UK	To identify the main stressors for the ED staff, study positive and negative behaviours associated with working under pressure and consider solutions that could help the ED team function effectively.	The '4-hour' target, excessive workload, personnel shortages, and a lack of teamwork inside the ED and with inpatient staff were among the most stated concerns.
30	Cant et al. (2016). Improving the non-technical skills of hospital medical emergency teams: The Team Emergency Assessment Measure (TEAM™).	Quantitative Study The TEAM™ instrument survey was completed by multiple clinicians at medical emergency episodes (n = 104) in two hospitals EDs in rural areas of Australia.	Australia	To test the validity and feasibility of the Team Emergency Assessment Measure (TEAM™) for evaluating real-world medical emergency teams' non-technical skills and to	The non-technical skills of medical ED teams are known to be often suboptimal; however, average ratings of 89% were found in this study. TEAM™ is a valid, reliable and easy to utilize for training and clinical settings, with benefits for team performance when used as an evaluation or debriefing tool.

				explore the instrument's contribution to practice regarding teamwork and learning outcomes.	
31	Pun et al. (2015). Factors affecting communication in emergency departments: doctors and nurses' perceptions of communication in a trilingual ED in Hong Kong	Qualitative Study Twenty-eight interviews with doctors and nurses in the ED.	Hong Kong	Examine clinicians' views of clinician-patient and clinician-clinician communication, including the main factors that prevent clinicians from achieving successful communication in a large, high-pressured trilingual ED.	The main findings that impacted the communication are issues with the transfer of information, lack of focus on building relationships with patients, limited time, high patient loads, and staff shortages.
32	Friberg et al. (2016). Interprofessional trust in emergency department - as experienced by nurses in charge and doctors on call.	Qualitative Study The study involved 20 participants, including 11 nurses in charge and 9 doctors on call. Four focus groups were conducted, with a few participants participating in more than	Norway	Describe the nature of interprofessional trust in a Norwegian ED, as nurses and doctors perceive it.	Study findings indicate that interprofessional trust is a changeable phenomenon that affects individual and systemic development.

		one.			
33	Johnsen et al. (2017). High-performing trauma teams: frequency of behavioral markers of a shared mental model displayed by team leaders and quality of medical performance.	Quantitative Study Using videos, the researchers examined how often leaders shared information with their teams and supported them during simulated emergencies.	Norway	It examines how certain leadership behaviours, such as sharing information and keeping the team updated, impact medical care quality.	Leaders who share information and offer support without being asked performed better. Success depended on leadership behaviors that encouraged teamwork and communication.
34	Grimsley et al. (2021). An Evaluation of the First 5 Minutes of Emergency Department Resuscitation During Pediatric Cardiopulmonary Arrests.	Quantitative Study The study involved a retrospective video review of 20 resuscitation episodes in a pediatric emergency department. A team's performance was analysed regarding task completion, leadership, and role assignment.	US	This study examined leadership and teamwork during pediatric resuscitation and identified gaps within the first five minutes of CPR.	Some critical tasks, such as chest compressions, were completed within the first minute, but others, such as placing defibrillator pads, were delayed. The team's leadership was generally effective, with team leaders summarizing care and assigning roles. The coordination of the team and the prioritization of tasks still need improvement.

35	James et al.'s (2022). Review DebrIeF: a collaborative distributed leadership approach to "hot debrief" after cardiac arrest in the emergency department - a quality improvement project.	Mixed-method ED staff were surveyed and interviewed about hot debriefs after cardiac arrests in the study. In 2020 and 2021, staff were involved in creating and using a debrief tool using a shared leadership approach to improve the process.	UK	To re-conceptualise the hot debrief process following cardiac arrest as a collaborative and distributed process within a multidisciplinary team.	Most staff supported hot debriefs in the ED during the first survey. As a result of introducing the tool, 42% of cardiac arrests have a debriefing, up from none previously. After six months, however, it was not wholly consistent. The second survey revealed doctors were more doubtful about the benefits, while nurses were more enthusiastic.
36	Hayirli et al. (2022). 233 Characteristics of Leadership Communication Associated With Burnout and Teamwork Experience Among Emergency Department Staff During the COVID-19 Pandemic.	Quantitative Study Researchers surveyed 191 ED staff members from two California hospitals.	US	Examine the relationship between burnout and teamwork experienced by ED staff during the COVID-19 pandemic.	It was found that making information easily accessible was the most important factor. Staff reported less burnout and more effective teamwork when they could easily locate and understand the needed information. In contrast, its impact was less significant when information was spread too

					frequently or inconsistently.
37	Horn et al. (2018). Managing a stressful work environment through improved teamwork - A qualitative content analysis of nurses working environment within emergency care.	Qualitative Study This study employed a content analysis with an inductive approach based on semi-structured interviews with nine nurses at EDs.	Philippines	To describe nurses' experiences of their working environment in an ED at a general hospital in Manila	One category, obstacles to providing a high quality of care, which includes two subcategories, managing a stressful work environment and teamwork's influence in controlling a complex caring environment, describes nurses' experiences with their work environment at the EDs in the Philippines.
38	Siassakos et al. (2011). The management of a simulated emergency: Better teamwork, better performance.	Quantitative Study Cross-sectional analysis of data from the Simulation and Fire-drill Evaluation (SaFE) randomised controlled trial. The participants were 140 healthcare professionals. Assessment – Blinded analysis of recorded simulations. Key outcome measures – Correlation of team performance (efficiency in conducting key clinical actions, including managing an essential drug, magnesium), and generic teamwork scores (utilising a validated	UK	To identify whether team performance in a simulated emergency is related to generic teamwork skills and behaviours.	The study found a significant positive correlation between clinical efficiency and teamwork scores through all three dimensions such as skills (Kendall's taub = 0.54, $p < 0.001$), behaviours (taub = 0.41, $p = 0.001$), and overall score (taub = 0.51, $p < 0.001$). Better teams managed the essential drug 2½ min faster (Mann–Whitney U, $p < 0.001$).

		tool that evaluates skills and behaviours, by Weller et al.).			
39	Wise et al. (2022). Nurses' role in accomplishing interprofessional coordination: Lessons in 'almost managing' an emergency department team.	Qualitative Study This study was based on 19 semi-structured interviews with ED nurses, physicians, and nurse practitioners.	Australia	To describe how nurse coordinators carried out day-to-day interprofessional coordination in an Australian ED team and to draw a few conclusions that might be useful to design nurse coordinator roles in other settings.	As coordinators accomplished interprofessional coordination, they demonstrated three themes: task coordination and oversight, maintaining patient flow, and negotiating an ambiguous role.
40	Milton et al. (2022). Healthcare professionals' perceptions of interprofessional teamwork in the emergency department: a critical incident study.	Qualitative Study Interview participants (n = 28) included 7 physicians (25%), 12 registered nurses (43%), 7 nurse assistants (25%) and 2 administrators (7%).	Sweden	To explain healthcare professionals' perceptions of critical incidents correlated to the enablers of and barriers to interprofessional teamwork in a high-risk context in the ED.	ED-specific communication and limited professional experience are crucial factors in handling critical incidents related to interprofessional teamwork. An essential aspect of critical incident management is the design of the physical work environment and how it promotes interprofessional teamwork.

41	Wise et al. (2021). A team mental model approach to understanding team effectiveness in an emergency department: A qualitative study.	Qualitative Study Twenty-nine ED clinicians (registered nurses, doctors and nurse practitioners) were interviewed.	Australia	To illustrate how the team mental model concept can enhance the understanding of team effectiveness in health care by exploring the knowledge that underpins it and the workplace conditions that support it in the Fast Track area of an ED	Getting healthcare teams 'on the same page' is a long-standing challenge.
42	Yaghmaei et al. (2022). Novice nurses' experiences from teamwork in the emergency department: A qualitative content analysis.	Qualitative Study An analysis of qualitative content was conducted on 11 novice nurses working in an ED. Data were collected using semi-structured interviews.	Iran	To explain the challenges and experiences of novice nurses regarding teamwork in EDs.	The data analysis led to the emergence of four themes "essential teamwork skills development," "contradictory relationships between team members," "unpleasant feelings and experiences," and "personal growth and maturation during teamwork."
43	Labrague (2024). Relationship between transformational leadership, adverse patient events, and nurse-assessed quality of care in emergency units: The mediating role of work satisfaction	Quantitative Study The study used standardized scales to survey 283 emergency room nurses in the Philippines. In SPSS,	Philippines	To examine the potential mediating role of work satisfaction in nursing	Nurse leaders who exhibit transformational leadership behaviours in the ER can foster work satisfaction, which enhances the nursing quality of care in the

		Hayes' PROCESS macro was used for mediation testing.		managers' transformational leadership, adverse patient events, and nurses' quality of care assessment.	ER.
44	Alsalmi and Alilyyani (2023). The role of authentic leadership in nurses' stress and burnout in emergency departments.	Quantitative Study The study employed a quantitative, cross-sectional design. The study variables were measured using standardized questionnaires distributed to nurses working in emergency departments. The study involved 188 nurses. The data was analysed using SPSS.	KSA	To evaluate the impact of authentic leadership on stress and burnout among emergency department nurses	The results of the study supported the hypotheses and reported that nurses' job stress was significantly influenced by authentic leadership ($R = -0.169$, $p = 0.0205$). As a result of this study, the relationship between authentic leadership and burnout was significant and negative, $R = -0.245$, $F(1,186) = 11.8$, $p = 0.0007$.
45	Ford et al. (2016). Leadership and Teamwork in Trauma and Resuscitation	The PubMed database was searched using the words "leadership" and "trauma" or "resuscitation" as title search terms by an expert in emergency medicine and trauma. There were three categories of results: 1) how leadership affects patient care; 2) which tools are available to measure	Literature Review	This investigation aimed to: 1. Explain how leadership and leadership style affect patient care; Explain how effective leadership is measured; and 3. Describe how	This review found that leadership improves care processes in trauma and can be enhanced through dedicated training despite little literature on leadership in resuscitations.

		leadership; and 3) methods to train doctors to be better leaders.		future physician leaders can be trained.	
46	Alasiri and Kalliecharan (2019). Strengthening Nurses Clinical Leadership in Saudi Hospitals	The Warwick Road map of leadership was adapted to analyse nurses' leadership practices and factors associated with low nurse clinical practices. Based on Walley and Wright's analytical tool, the identified strategies were analysed in relation to KSA's context.	Literature Review	To analyse nurses' clinical leadership in Saudi governmental hospitals and the specific context shaping the practices and propose a way to strengthen nurse leadership.	Several factors are associated with low nurse clinical leadership practices, including a lack of robust nursing governance and nurses' scope of practice and a low level of nurses' involvement at the national and organizational levels in making decisions concerning health services, health systems, and practice scope.
47	Alsallum et al. (2019). Nurses' and Physicians' Attitudes Towards Nurse-Physician Collaboration in Critical Care.	Quantitative Study The study included 239 participants (169 nurses and 70 physicians) who worked in intensive care units (ICUs) or emergency departments (EDs). Alsallum et al. (2019) used t-tests, one-way ANOVA, and Pearson correlation to analyze and compare nurses' and physicians' attitudes toward collaboration.	KSA	This study examined how nurses' and physicians' attitudes toward collaboration in critical care settings affected their work dynamics and patient care outcomes at a Saudi teaching hospital.	Their study found that nurses had more positive attitudes toward collaboration than physicians, with nurses scoring 3.68 compared with physicians' 3.4. Nurses were significantly more likely than physicians to support shared education (3.68 compared with 3.4, $p = 0.02$) and nurse-physician collaboration (3.7 vs. 3.53). Moreover, they found that nurses are more likely to be satisfied with their work when they feel supported by collaboration.

Appendix 2: Interview Questions

1. How would you define teams, what teams do you work in, and what do they look like?
2. What does good teamwork look like?
3. What difference does a 'good team' make in terms of service delivery?
4. What does poor teamwork look like?
5. What difference does a 'poor team' make in terms of service delivery?
6. Have you received any type of teamwork skills training before? If yes, what types?
7. What role do you typically play on a team?
8. Do you prefer to work in a team or independently, and why?
9. What teamwork skills are required in the admission areas of the ED?
10. Why are these skills required?
11. Have you practised these required skills?
12. What are the barriers and enablers you encounter when practising teamwork in the admission areas of the ED, and can you please provide examples?
13. Can you give examples of when you work closely and effectively with the team members?
14. Have you experienced any type of conflict with team members? If yes, what, and how do you handle conflicts?
15. Have you experienced any challenges when interacting with the team members? If yes, what are they?
16. In your opinion, what makes a successful team and why?

Appendix 3: Application for Ethical Review

School of Healthcare Sciences Research Ethics Committee

For Office Use Only	
SREC Reference: [x]	Meeting/Review Date: [x]

SECTION 1. GENERAL INFORMATION	
Application Type:	□ Staff √ PGR student □ PGT/Masters Student □ Undergraduate
Research Project Title:	An Exploration of Emergency Staff's Perceptions and Experiences of Teamwork in an Emergency Department in the Kingdom of Saudi Arabia
Short Title (where applicable):	
For Staff Projects	
Name of Chief/Principal Investigator:	
Contact details:	
Other members of the research team:	
For Student Projects	
Name of Student:	Sami Alanazi
Contact details:	
Name of Supervisor(s):	
Contact details:	
Other members of the research team:	

SECTION 2. SCREENING QUESTIONS			
		Yes	**No**
[2.1	Is the research project categorised as 'Research' (as defined in the Cardiff University Policy on the Ethical Conduct of Research involving Human Participants, Human Material or Human Data (Ethics Policy))? *If **no** (i.e. the research project is a Service Evaluation or Audit), the Committee is not required to conduct a review of the proposal but may choose to do so. **Please contact [the School Ethics Officer] to seek advice before proceeding with this application.***	**Yes**	
[2.2	Does the research project involve human participants, human material or human data (as defined in the Ethics Policy)? *If **no**, you are not required to submit the research proposal to this Committee. **Please do not continue with this application.]***	**Yes**	
[2.3	Does the research project require review by an external ethics committee (refer to Appendix 1 of the Ethics Policy)? Please note that this includes all research		

	projects involving participants who lack the capacity to consent. *If **yes**, the research project should be submitted to the relevant external ethics committee for review and does not fall within the remit of this Committee. Please contact the Research Governance Team for further advice. **Please do not continue with this application.***		**No**
2.4	Has the research project been ethically reviewed by another university or research institution (for example, where the Chief/Principal Investigator for the research project is based at another institution)? *If **yes,** please provide evidence of the review conducted (such as an outcome letter or communication) and the ethical review policy of the relevant institution or committee. **Please do not continue with this application.***		**No**
2.5	Does the research project only involve the use of information that is publicly and lawfully available, e.g. census data and population statistics published by government departments. Note: research projects involving the use of Human Data obtained from social media (or similar internet forums) do not fall within this category. *If **yes**,* please seek advice from the [School Ethics Officer], providing details of the information and its source. ***The [School Ethics Officer] will determine whether you are required to proceed with the application.*** *Please read the Cardiff University Framework for ethical review of projects on publicly available data or secondary data.*		**No**
2.6	Does the research project fall within the scope of the UK Policy Framework for Health and Social Care Research? This Framework broadly applies to research taking place within, or involving, the health and social care systems. *If **yes**, you will need to apply to the Research Governance Team for Sponsorship using the Advanced Project Information Proforma (APIP) (available on the Cardiff University intranet). The Research Governance Team will advise you on the approvals that are required for the research project after it has conducted a review of the APIP and supporting documentation. **Please do not continue with this application until you have sought advice from the Research Governance Team.***		**No**
2.7	Does the research project involve the collection or use of Human Tissue (including, but not limited to, blood, saliva and bodily waste fluids)? *If **yes**, the research project should be submitted to the Human Tissue Act Compliance Team (HTACT) prior to submission to an ethics committee. **Please do not continue with this application until you have sought advice from HTACT.***		**No**
2.8	Does the research project fall within the scope of the University's Security-sensitive Research Policy? This Policy broadly applies to research involving terrorism, extremism or radicalisation (or access to materials of such a nature). *If **yes**, you must register the research in accordance with the Policy and comply with the IT and security arrangements contained in the Policy.*		**No**
2.9	Has the research project received an appropriate peer/scientific review? (For student research projects, a review by the research project supervisor is an acceptable form of scientific review) *If **no**, please obtain an appropriate peer/scientific review before submitting the application to this Committee.*	**Yes**	

2.10	Have you and all other Cardiff University co-applicants/ /Supervisors/Members of the research team (as listed in Section 1) completed the University's Research Integrity Online Training Programme? *If **no**, please complete the training before submitting the application to this Committee.*	**Yes**	

If the research project involves the use of animals, please contact the Cardiff University Biological Standards Office bso@cardiff.ac.uk to seek further advice.

SECTION 3. PROJECT SUMMARY

3.1	Summarise the research project (including the purpose and its methodology) using language that would be understood by a lay person.

Teamwork practices have been recognised as a significant strategy to improve patient safety, quality of care, and staff and patient satisfaction in healthcare settings, particularly within in the emergency department (ED). The EDs depend heavily on teams of interdisciplinary healthcare staff to carry out their operational goals and core business of providing care to the seriously ill and injured. The ED is also recognised as a high-risk area in relation to service demand and potential for human error. Few studies have considered the perceptions and experience of the ED staff (physicians, nurses, allied health professionals, and administration staff) in terms of the practice of teamwork, especially in Saudi Arabia (KSA), as no studies have been conducted to explore the practices of teamwork in the EDs.

Aim: To explore the practices of teamwork from the perspectives and experiences of staff (physicians, nurses, allied health professionals, and administration staff) when interacting with each other in the admission areas in the ED of a public hospital in the Northern Borders region of KSA.

Method: A qualitative case study design will be utilised, drawing on three methods for the data collection, comprising documentary review (policies, checklists, agenda or minutes of meetings, background papers); event programmes (i.e., printed outlines); teamwork practices and guidelines such as communication, leadership, conflict resolution, decision-making, back up behaviour, regulation, protocols, any documents related to teamwork practices. The second method for the data collection will be semi-structured interviews (n=20) with physicians (5), nurses (5), allied health professionals (5), and administrative members (5) working in the ED of a hospital in the Northern Borders region of KSA. The third method is non-participant direct observation. All Data will be analysed using a thematic analysis technique.

3.2	State the research question(s).

6. To ascertain the perspectives of the staff (physicians, nurses, allied health professionals, and administration staff) about the practice of teamwork in the ED of a public hospital in the Northern Borders region of KSA.
7. To examine the experiences of the staff about the practice of teamwork when interacting with each other in the admission areas in the ED of a public hospital in the Northern Borders region of KSA.
8. To identify the barriers and enablers experienced by the emergency staff when practising teamwork in the admission areas in the ED.
9. To determine whether the ED staff members work in teams or independently and why.
10. To identify what are the teamwork skills required in the admission areas of the ED, and why they are required.

3.3	Estimated start date.
01/09/2021	
3.4	Estimated end date (usually the end of data collection).
30/01/2022	
3.5	Is the research project funded? *If **yes**, please name the funding body.*
Yes	

The Royal Embassy of Saudi Arabia Cultural Bureau			
3.6	Are there any potential conflicts of interest? *If **yes**, please confirm the action you propose to take to address such conflicts.* *Information and guidance on conflicts of interest is contained in the Research Integrity Online Training Programme and the Research Integrity and Governance Code of Practice.*		
There is no conflict of interest to declare.			
SECTION 4. FULL REVIEW CRITERIA			
Your answers to the questions in Section 4 will help the Committee determine whether your project requires full or proportionate review. If all 'No' boxes apply, your project may be considered for proportionate review. If a 'Yes' box applies, your project will proceed to full review unless the School has approved a Standard Operating Procedure for that particular criterion. Where a Standard Operating Procedure applies, this is confirmed below. If you have complied with the Standard Operating Procedure, your project may be considered for proportionate review.			
		Yes	**No**
4.1	Will the research project be performed without the participants' prior consent?		No
4.2	Does the research design include an element of deception, including covert research?		No
4.3	Will the research project involve children under the age of 18 or 'at risk' (vulnerable) adults or groups? *The Cardiff University Safeguarding Children and Adults at Risk: Policy and Guidance sets out examples of 'at risk' or 'vulnerable' adults.*		No
4.4	Does the research project include topics which may be considered highly sensitive for participants? *This includes sexual behaviour, illegal activities, political, religious or spiritual beliefs, race or ethnicity, experience of violence, abuse or exploitation, and mental health.*		No
4.5	Does the research project require access to records of a sensitive or confidential nature, including Special Category Data? *Special Category Data is defined in data protection legislation and currently includes information about an individual's: racial or ethnic origin; political opinions; religious beliefs; trade union membership; physical or mental health; sexual life or orientation; commission of offences or alleged offences; genetic data; and biometric data.*		No
4.6	Is permission of a gatekeeper required for initial or continued access to participants? *This includes participants in custody and care settings, or research in communities where access to research participants is not possible without the permission of another adult, such as another family member or a community leader.*		No
	If you have answered 'yes' to 4.6 does your research comply with the School's		

	Standard Operating Procedure for Research using a gatekeeper to facilitate recruitment? If 'yes' then your project will be eligible for proportionate review.		
4.7	Does the research project involve intrusive or invasive procedures? *This includes the administration of substances, vigorous physical exercise (for example, maximal incremental exercise testing or testing procedures that involve fatigue), procedures involving pain or more than mild discomfort to participants (including the risk of psychological distress, discomfort or anxiety to participants).*		No
4.8	Does the research project involve visual or audio recordings where participants may be identified? *It is expected that you will anonymise data during the transcription process and that confidentiality will be maintained. Please select "no" if participants will not be identifiable in the study results following anonymisation of the data. Please select "yes" if participants will be identifiable in the study results, for example, if they have a rare condition or are well-known within their field.*		No
4.9	Does the research project involve the collection or use of human tissue?		No
4.10	Does the research project involve more than a minimal risk of harm to the safety and wellbeing of participants and/or the Researchers? *Please answer this question based on your assessment of the risks involved in this project. Further information about possible harm or potential risks to participants/researchers must be provided in Section 7 of this form.*		No

SECTION 5. PARTICIPATION AND RECRUITMENT

5.1	How will you identify and recruit participants for the research project?

Once approval is obtained from the Ethics Committee at Cardiff University School of Healthcare Science, Northern Health Affairs in KSA will be contacted through an email to obtain the second ethical approval and permission to access the hospital. This email will incorporate all the research instruments, including the ethical approval letter obtained from the Ethics Committee at Cardiff University, the interview questions, the participant information sheet (PIS), the invitation letter, and the participant consent form.

Once Northern Health Affairs grant the permission, it will be sent via email to the hospital management and the ED management team to approve and for permission to be granted for the study.

Once permission from the hospital and ED management teams has been obtained, the researcher will send the PIS and the invitation letter through an email to the ED management. They will distribute them to all the ED staff (physicians, nurses, allied health professionals, and administration staff).

Once the researcher receives emails from people who are willing to participate and meet the inclusion and exclusion criteria of the study, the researcher will ask the first five of each group via emails to complete the consent form and return them through emails to the researcher. The researcher will set a time limit of two weeks maximum for the return of consent forms. Reminders will be sent from the ED department to encourage the staff to participate in the study.

In addition, the researcher will seek permission from the hospital management to observe the staff when practising teamwork in the ED.

Purposive Sampling

A purposive sample method will be used to select the participants to take part in the interviews. Purposive sampling will be employed to recruit those who have knowledge of the phenomenon or expertise with the subject of assessment (Creswell and Poth 2016).

5.2	How many participants are you aiming to recruit? *If applicable, please include a breakdown of participants by type and number.*

The study population will be ED physicians, nurses, allied health professionals, and administration staff within the ED department of one public hospital in KSA. The goal is to recruit a purposive sample of staff working within this department to reflect the professional groups working within it. Thus, the sample will include physicians (5), nurses (5), allied health professionals (5), and

administrative members (5) working in the ED (n=20) of one hospital in the Northern Borders region of KSA.	
5.3	What are the inclusion and exclusion criteria for participants?
Participants will be chosen according to the following inclusion criteria: • Saudi and non-Saudi staff; • Staff from different age groups, education levels, positions, ethnicities, faiths and genders; • One year or more of experience; • English and non-English speakers. Participants who have less than one year of experience will be excluded because this group will be too inexperienced in team working to be able to contribute to the research question.	
5.4	Will the research project involve participants that are Cardiff University staff or students or clients of the University (or the place in which you may otherwise work)? *If applicable, please provide details.*
No	
5.5	Please give details of where the study will be sited and if informal consent has been obtained to access these facilities/ participants? Evidence of consent is not required if using HCARE internal facilities. The study will be conducted at the emergency department of North Tower Medical Hospital in Arar city in the Northern Borders region of Saudi Arabia. Informal agreement to participate has been obtained.
SECTION 6. CONSENT PROCEDURES	
6.1	Will informed consent be obtained from participants? If so, how? *Please include who will be taking consent, how consent will be recorded when participants will be provided with information about the research project, and how long potential participants will be given to decide whether to take part.*
Once permission from the hospital and ED management teams has been obtained, the researcher will send the PIS and the invitation letter through an email to the ED management. They will distribute them to all the ED staff (physicians, nurses, allied health professionals, and administration staff). Once the researcher receives emails from people who are willing to participate and meet the inclusion and exclusion criteria of the study, the researcher will ask the first five of each group via emails to complete the consent form and return them through emails to the researcher. The researcher will set a time limit of two weeks maximum for the return of consent forms. Reminders will be sent from the ED department to encourage staff to participate in the study. The consent forms will be kept on a password-protected personal computer and will only be accessed by the researcher and his supervisors. Also, the data will be held securely on a secure server network at Cardiff University for five years in accordance with the Data Protection Act 2018.	
6.2	Will participants be offered any incentives to take part in the research project?
No	
6.3	If a questionnaire is to be used, will you give participants the option of omitting questions they do not wish to answer?
No questionnaire	
6.4	Will participants be informed that their participation is voluntary and that they may withdraw at any time and for any reason?
Yes All participants will be informed that their participation is voluntary, and they can withdraw at any time and for any reason. This will be clearly stated in the information sheet and the consent form and will be repeated at the beginning of all interviews. What will happen to their data if they withdraw? If the data are still held and can identify the person, they will be withdrawn.	

If the data have already been anonymised, they cannot be withdrawn, but importantly, the person cannot be identified.

SECTION 7. POSSIBLE HARM TO PARTICIPANTS/RESEARCHERS

7.1	Is there is a risk of the participants experiencing physical, emotional or psychological harm or distress*? If yes, please provide details of how ethical issues will be handled and how any risks will be minimised. Please consider whether the research project includes topics which could be considered as highly sensitive for participants.*

There are no risks or disadvantages to participating in this study.

- All the participants will be informed that the interviews are confidential, and the data presented will be anonymised. The participants will be informed that each participant will be represented in the research and publications by a pseudonym instead of their real name, with any potentially identifying characteristics also being removed.
- Pseudonyms will be used to link any data observed to protect the participants' identities. If the researcher observes any issues of safeguarding or serious concern from a member of staff or patients, the researcher will first talk to their supervisory team for advice. It may then be raised with the department.
- The participants are able to decline to answer any question without giving reasons.
- If an interviewee discloses any issues of safeguarding or serious concerns about another member of staff or patients, the researcher will first talk to their supervisory team for advice. It may then be raised with the department. A statement has been added to the PIS to make it clear to participants that this could happen.

7.2	Is there a risk of the Researcher(s) experiencing physical, emotional or psychological harm or distress? *If yes, please provide details of how ethical issues will be handled and how any risks will be minimised.*

There are no risks or disadvantages to the researcher in this study.
There are few or no risks of the researcher experiencing physical, emotional or psychological harm or distress in this study. However, Cardiff University offers a wellbeing and counselling service to students to support them during their studies. In addition, the researcher will contact his academic supervisors in case of experiencing emotional complications or psychological harm during the research.

SECTION 8. DATA MANAGEMENT, CONFIDENTIALITY AND DATA PROTECTION

8.1	How, and by whom, will data be collected?

This will be a single case study to be conducted in a hospital in the Northern Borders region of Saudi Arabia. The population of this study will be the ED physicians (5), nurses (5), allied health professionals (5), and administration staff (5). This sample reflects the staff members within ED services of public hospitals in KSA (Al Owad et al. 2018; MOH 2018).
Data collection within the case study will comprise non-participant direct observation, semi-structured face-to-face interviews, and documentary review. This use of these methods is common within qualitative methodologies (Natow 2020) and means the triangulation of these methods will contribute to developing a comprehensive understanding of phenomena (Patton 1999).
In the first stage, the researcher will conduct the observation to uncover the practice of teamwork among the healthcare staff when they interact with each other in the ED. During the observation, the researcher will be placed in the ED, where he can see and hear what is happening. All observation sessions will be recorded in written format; a research notebook will be used to record all notes in each observation session, and this will be performed during the observation session. The researcher will follow the rule of thumb that was developed by Mills and Stothard (2000) to decide how long the observation period will be. Mills and Stothard (2000) suggest that a rule of thumb is to observe 30–60 minutes of high-tempo operations and 2–3 hours at a slower tempo per observation. Mills and

Stothard (2000) suggest not making the period so long that the observer becomes fatigued. The researcher will aim to attend three days a week for two weeks of observation. **In the second stage**, the researcher will start with a documentary collection from the Ministry of Health because it oversees the healthcare and health policy of KSA (Walston, Al-Harbi and Al-Omar 2008; MOH 2018) and from 'the New Hospital' (a pseudonym) in the Northern Borders region. The researcher will collect all documents related to teamwork practices in the emergency department. **In the third stage,** the researcher will conduct semi-structured face-to-face interviews with the participants to obtain in-depth information about teamwork in the emergency department.	
8.2	Will you be accessing or collecting Personal Data (identifiable personal information) as part of the research project? *If yes, please confirm what data will be accessed and/or collected (including details of the information participants are asked to provide on a written consent form) and by who*
Yes, the only personal data to be collected from the participants are names and signatures, which they will write on their consent forms. However, any personal data will not be connected to the interview data and will be recorded separately.	
8.3	How long will you retain the Personal Data collected in connection with the research project?
Adhering to Cardiff University guidelines, the electronic data will be held securely, stored in a password-protected personal computer and will only be accessed by the researcher and his supervisors. All participants' data will be kept for a minimum period of five years after the end of the project, or after publication of any findings based upon the data (whichever is later) and afterwards destroyed.	
8.4	What efforts will be made to anonymise the data collected (where possible)?
All face-to-face interviews will be recorded by using two digital recorders in case one fails. The participants will be informed that all interviews are confidential, and the data presented will be anonymised. Data management for this research will be developed in compliance with the research data management guidelines set by Cardiff University. All data will be securely stored in accordance with the Data Protection Act 2018 (UK Legislation 2018). All data electronically collected for this study will be securely stored in the researcher's university drive, and access to the data will be restricted to the researcher and supervisory team. In addition, the researcher's field notes will be saved on the secure servers at Cardiff University, and access to the data will be restricted to the researcher and supervisory team. Any identifiable data will be kept for five years after the completion of this research study and afterwards destroyed.	
8.5	Are you proposing to utilise 'public task' as the lawful basis for processing Personal Data for the purposes of the research project (as recommended in the University's GDPR Guidance for Researchers)? *If no, please explain why and what alternative lawful basis you propose to use.*
Yes	
8.6	Have you utilised/incorporated into your Participant Information Sheet the following sections from the University's template Participant Information Sheet: *'What will happen to my Personal Data'* and *'What happens to the data at the end of the research project?'* *If **no**, please explain why this has not been used and how you have otherwise ensured that the relevant data protection/privacy information has been provided to participants.*
Yes	
8.7	For how long will the collected anonymised data be retained?
Adhering to Cardiff University guidelines, the electronic data will be held securely stored in a password-protected personal computer and will only be accessed by the researcher. All participants' data will be kept for a minimum period of five years after the end of the project, or after publication of any findings based upon the data (whichever is later) and afterwards destroyed.	
8.8	Who will have access to the data?
Only the researcher and his academic supervisors will have access to the collected data.	

8.9	Will the data be shared in any way, for example through deposit in a data repository, with third parties, or a transcription service?

The anonymised non-English language data will be shared with a well-known translation company.

SECTION 9. OTHER ETHICAL CONSIDERATIONS

Please outline any other ethical considerations raised by the research project and how you intend to address these. You are obliged to bring to the attention of the SREC any ethical issues not covered in this Ethics Review Application Proforma.

SECTION 10. SUPPORTING DOCUMENTS

I have attached the documents, as indicated in the table below, in support of this application.
Please note that the documents listed below **MUST BE** provided where relevant to the research project, alongside any other documents relevant to recruitment, consent and participation.

		Yes	**No**	**Version no.** (where applicable)
1	Research Project Protocol/Proposal	√		
2	Recruitment Adverts/Invitation Letters	√		
3	Participant Information Sheet	√		
4	Consent Form	√		
5	Data Collection Tools (e.g. questionnaires)	√		
6	Other participant communications (e.g. debrief sheets)		√	
7	Evidence of Research Integrity training completion		√	

SECTION 11. SIGNATURES AND DECLARATIONS

General declaration

I confirm that:

a. The information in this form is accurate to the best of my knowledge and belief, and I take full responsibility for it.
b. I have the necessary skills, training and or/expertise to conduct the research project as proposed.
c. I am familiar with the University's health and safety requirements and policies and that all relevant health and safety measures have been taken into account for the research project.
d. I am familiar with and will comply with the University's Policy on the Ethical Conduct of Research involving Human Participants, Human Material or Human Data and the University's Research Integrity and Governance Code of Practice.
e. Relevant equality and diversity considerations were taken into account when designing the research project.
f. If the research project is approved, I undertake to adhere to the research project protocol, the terms of the full application as approved and any conditions set out by the Committee and any other body required to review and/or approve the research project.
g. I will notify the Committee and all other review bodies of substantial amendments to the protocol or the terms of the approved application, and to seek a favourable opinion from the Committee before implementing the amendment.

FOR STAFF PROJECTS

Signed: Chief/Principal Investigator
Print name:
Date:

FOR STUDENT PROJECTS

Signed: Student:	Signed: Supervisor
Print name: Sami Alanazi	Print name:
Date:09/09/2021	Date:09/09/2021

Appendix 4: Participant Information Sheet

Cardiff University- School of Healthcare Sciences

Heath Park Campus

Cardiff, CF14 4XN

Student's Name: Sami Alanazi

The Research Topic: An Exploration of Emergency Staff's Perceptions and Experiences of Teamwork in an Emergency Department in the Kingdom of Saudi Arabia

You are being invited to take part in a research project. Before you decide whether or not to take part, it is important for you to understand why the research is being undertaken and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish.

Thank you for reading this.

1. What is the purpose of this research project?

Teamwork practices have been recognised as a significant strategy to improve patient safety, quality of care, and staff and patient satisfaction in healthcare settings, particularly within the emergency department (ED). The EDs depend heavily on teams of interdisciplinary healthcare staff to carry out their operational goals and core business of providing care to the seriously ill and injured. The ED is also recognised as a high-risk area in relation to service demand and the potential for human error. Few studies have considered the perceptions and experiences of the ED staff (physicians, nurses, allied health professionals, and administration staff) about the practice of teamwork, especially in Saudi Arabia (KSA), as no studies have been conducted to explore the practices of teamwork in the EDs.

Therefore, this study aims to explore the practices of teamwork from the perspectives and experiences of staff (physicians, nurses, allied health professionals, and administration staff) when interacting with each other in the admission areas in the ED of a public hospital in the Northern Borders region of KSA.

The findings of this study will inform researchers across the world and the Saudi Ministry of Health about the barriers and enablers for successful team working. Moreover, it will enhance their understanding of how teams function in the ED and, if necessary, support teams' performance in the future.

2. Why have I been invited to take part?

You have been invited because you have met the inclusion criteria for this study, which are:

- Saudi and non-Saudi staff;
- Staff from different age groups, education levels, positions, ethnicities, faiths and genders;
- One year or more of experience;
- Can speak English or Arabic languages.

Participants who have less than one year of experience will be excluded because this group will be too inexperienced in team working to be able to contribute to the research question.

3. Do I have to take part?

No, your participation in this research project is entirely voluntary, and it is up to you to decide whether or not to take part. If you decide to take part, I will discuss the research project with you and ask you to sign a consent form. If you decide not to take part, you do not have to explain your reasons, and it will not affect your legal rights.

You are free to withdraw your consent to participate in the research project at any time without giving a reason, even after signing the consent form.

4. What will taking part involve?

- You will be asked to complete the attached consent form within two weeks prior to the interview so that you have had time to read it and decide.
- Each semi-structured interview will last no longer than 60 minutes.

- The interview will be conducted face-to-face at a place of your preference and a time that is convenient for you. The interviews will not be undertaken during working hours as this will impact the emergency services.

- Please note that the researcher will take notes and record the interview sessions in an audio format with your permission; this is to ensure that your answers are correctly determined. Your identity will be kept anonymous, and you will be assigned a pseudonym during the interview sessions. Also, you can skip any question that you do not want to answer.

- The researcher will seek permission from you to be observed as you practice teamwork in the ED. The first part of the observations will focus on observing the general set-up of the ED (i.e., number of emergency rooms, number of beds, number of stations, and how many individuals are at each station and what their roles are). The second part of the observation will focus on the routine activities at the ED, including who was involved in the activities, their roles in the activity and their characteristics. The third part of the observation will involve how the staff members were interacting with each other in the ED.

- The researcher will conduct approximately six non-participant observations. The researcher will only be watching and taking notes and will not be directly involved with any activity as you practice teamwork in the ED. Elements to be observed include communication – both verbal and non-verbal, evidence of leadership and the practice of collaboration. The observations will assist the researcher in generating data from the process, behaviours, and actions of the participants. The observation will last 30–60 minutes of high-tempo operations and 2–3 hours at a slower tempo per observation. The researcher will aim to attend three days a week for two weeks of observation.

- The data will be kept securely. The audio recording device will be secured with a password. The audio recording will be transcribed, and your identifying information will be removed from the transcription to protect your confidentiality. No one will be able to link the data you have provided to your name or identity. The interview transcripts will bear only your assigned pseudonym.

- The storing of recordings is encrypted and directly saved to the research's Cardiff University storage.

5. Will I be paid for taking part?

There will be no payment for this research.

6. What are the possible benefits of taking part?

There will be no direct advantages or benefits to you from taking part, but your contribution will help us understand the practice of teamwork in the ED. This will contribute to the growing body of evidence supporting the advancement of teamwork practices in EDs.

7. What are the possible risks of taking part?

- There are no risks or disadvantages to participating in this study.
- You are able to decline to answer any question without giving reasons.
- If an interviewee discloses any issues of safeguarding or serious concerns about another member of staff or patients, the researcher will first talk to their supervisory team for advice. It may then be raised with the department.

8. Will my taking part in this research project be kept confidential?

All information collected from (or about) you during the research project will be kept confidential, and any personal information you provide will be managed in accordance with data protection legislation. Please see 'What will happen to my Personal Data?' (below) for further information.

The findings will be used for the purpose of a PhD degree dissertation entitled, *An Exploration of Emergency Staff's Perceptions and Experiences of Teamwork and the Skills Required in an Emergency Department in the Northern Borders Province of Saudi Arabia*. The findings of this study may be published in an internal report or a peer-reviewed publication. There will be an opportunity for a copy of the research results to be sent to you following this study.

9. What will happen to my personal data?

In this research study, no indication of your name will appear in this dissertation. During the data analysis, the researcher will represent each participant with a pseudonym instead of their

real names. Also, the observations will not be linked to your identification. Pseudonyms will be used to link any data observed to protect your identity.

Cardiff University is the Data Controller and is committed to respecting and protecting your personal data in accordance with your expectations and Data Protection legislation. Further information about Data Protection, including:

- Your rights
- The legal basis under which Cardiff University processes your personal data for research
- Cardiff University's Data Protection Policy
- How to contact the Cardiff University Data Protection Officer
- How to contact the Information Commissioner's Office

These may be found at https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection.

Adhering to Cardiff University guidelines, the electronic data will be held securely stored on a password-protected personal computer and will only be accessed by the researcher and his supervisors. All participants' data will be kept for a minimum period of five years after the end of the project or after publication of any findings based upon the data (whichever is later) and afterwards destroyed.

The research team will anonymise all the personal data it has collected from or about you in connection with this research project, with the exception of your consent form. Your consent form will be retained for a minimum period of five years and may be accessed by members of the research team and, where necessary, by members of the university's governance and audit teams or by regulatory authorities. Anonymised information will be kept for a minimum period of five years but may be published in support of the research project and/or retained indefinitely where it is likely to have continuing value for research purposes.

What will happen to my data if I withdraw?

If the data are still held and can identify the person they came from, they will be withdrawn.

If the data has already been anonymised, they cannot be withdrawn, but importantly, the person cannot be identified.

Note that it will not be possible to withdraw any anonymised data that has already been published or, in some cases, where identifiers are irreversibly removed during the course of a research project from the point at which they have been anonymised.

10. What happens to the data at the end of the research project?

Adhering to Cardiff University guidelines, the electronic data will be held securely stored on a password-protected personal computer and will only be accessed by the researcher and his supervisors, where necessary, by members of the university's governance and audit teams or by regulatory authorities.

The data will be published without your personal data collected from or about you in this research project. The data will be opened to future research and can be used by other researchers.

11. What will happen to the results of the research project?

We anticipate publishing the findings of the study in a research thesis and within scientific journals. We may utilise some excerpts of what you have explained to illustrate the findings, but pseudonyms will be used, and we will not reveal any details that identify you personally.

There will be an opportunity for a copy of the research results to be sent to you following this study.

12. What if there is a problem?

If you wish to raise a complaint, you can contact:

The researcher Sami Alanazi

If you wish to complain or have grounds for concern about any aspect of the manner in which you have been approached or treated during the course of this research, please contact the researcher's supervisors.

If your complaint is not managed to your satisfaction, please contact the Director of Research Governance & Active Health Research Theme Lea.

If you are harmed by taking part in this research project, there are no special compensation arrangements. If you are harmed due to someone's negligence, you may have grounds for legal action, but you may have to pay for it.

13. Who is organising and funding this research project?

The Royal Embassy of Saudi Arabia Cultural Bureau will fund this research.

The research was organised by the student and his supervisors from the School of Healthcare Sciences, Cardiff University.

14. Who has reviewed this research project?

This research project has been reviewed and given a favourable opinion by the School of Healthcare Sciences Research Ethics Committee, Cardiff University.

15. Further information and contact details

Should you have any questions relating to this research project, you may contact us during normal working hours:

Thank you for considering to take part in this research project. If you decide to participate, you will be given a copy of the Participant Information Sheet and a signed consent form to keep for your records**.**

I would be happy to answer any questions you have, and of course, I look forward to meeting you.

Appendix 5: Invitation to Take Part in a Research Study

Dear Mr/Ms.

My name is Sami Alanazi, and I am a doctoral student at the School of Healthcare Sciences at Cardiff University, Wales. I am kindly requesting your participation in a doctoral research study that I am conducting titled *An Exploration of Emergency Staff's Perceptions and Experiences of Teamwork and the Skills Required in an Emergency Department in the Northern Borders Province of Saudi Arabia*. The intention is to explore the practices of teamwork from the perspectives and experiences of staff (physicians, nurses, allied health professionals, and administration staff) when interacting with each other in the admission areas in the emergency department of a public hospital in the Northern Borders region of Saudi Arabia.

The study involves semi-structured interviews with physicians (5), nurses (5), allied health professionals (5), and administrative members (5) to gauge your views about the practices of teamwork in the admission areas in the emergency department. The content of the interview will be about how you view the practice of teamwork in the admission areas of the ED and how you experience it. Also, to identify what are the barriers and enablers you experience when practising teamwork and whether you prefer to work in teams or independently. Lastly, I would like to gather your opinions on the skills required for 'good' teamwork.

Your cooperation and your support are crucial to achieve the aims of this research. Your participation is completely voluntary and you may withdraw from the study at any time you like. In this research study, no indication of your name would appear in this dissertation. During the data analysis, the researcher will represent each participant by a pseudonym instead of using their real names.

Considering your professional work experience and position in your hospital, I believe your opinion can make a valuable contribution to my study by participating in a semi-structured interview. The interview will be approximately 45–60 minutes long.

Your participation in this study will be highly appreciated.

Sincerely,

Sami Alanazi, Doctoral Student, Cardiff University

Appendix 6: Consent Form

Cardiff University- School of Healthcare Sciences

Heath Park Campus

Cardiff, CF14 4XN

Student's Name: Sami Alanazi

Title of research project: An Exploration of Emergency Staff's Perceptions and Experiences of Teamwork and the Skills Required in an Emergency Department in the Northern Borders Province of Saudi Arabia.

SREC reference and committee:

Name of Chief/Principal Investigator: Sami Alanazi

	Please initial box
I confirm that I have read the information sheet dated 15/04/2021 version 3, for the above research project.	
I confirm that I have understood the information sheet dated 15/04/2021 version 3 for the above research project, that I have had the opportunity to ask questions and that these have been answered satisfactorily.	
I understand that my participation is voluntary, and I am free to withdraw at any time without giving a reason and without any adverse consequences (e.g. to medical care or legal rights, if relevant). I understand that if the data are still held and can identify you, they will be withdrawn. If the data have already been anonymised, they can't be withdrawn but also cannot be identified and may be kept by Cardiff University.	
I understand that data collected during the research project may be looked at by individuals from Cardiff University or regulatory authorities where it is relevant to my taking part in the research project. I give permission for these individuals to have access to my data.	
I consent to the processing of my personal information, such as my name and the job position, for the purposes explained to me. I understand that such information will be held in accordance with all applicable data protection legislation and in strict confidence unless disclosure is required by law or professional obligation.	

I understand that no one will have access to the recording beyond the researcher and his four supervisors, and how the data will be stored and what will happen to the data at the end of the research project. If you have specific options to decide how the data can be used, please list them here:	
I understand that after the research project, anonymised data may be published and made publicly available via a data repository and may be used for purposes not related to this research project, such as academic research papers and presentations. I understand that it will not be possible to identify me from these data that are seen and used by other researchers for ethically approved research projects, on the understanding that confidentiality will be maintained.	
The researcher intends to conduct the interviews remotely using video conferencing software such as the Zoom platform or Skype application, and I consent to be audio recorded/ video recorded for the purposes of the research project, and I understand how it will be used in the research.	
I understand that anonymised excerpts and/or verbatim quotes from my interview may be used as part of the research publication.	
I understand how the findings and results of the research project will be written up and published.	
I agree to take part in this research project.	

Name of participant (print)	Date	Signature
Name of person taking consent (print)	Date:	Signature

The Researcher

Role of the person taking consent

(print)

Thank you for participating in my research. You will be given a copy of this consent form to keep.

Appendix 7: Permission from the Research Ethics Committee in the School of Healthcare Sciences

School of Healthcare Sciences
Ysgol y Gwyddorau Gofal Iechyd

Interim Head of School and Dean /Pennaeth yr Ysgol Dros Dro a Deon Professor David Whitaker

Cardiff University
Eastgate House
35-43 Newport Road
Cardiff
www.cardiff.ac.uk

Prifysgol Caerdydd
Ty Eastgate
35 – 43 Heol Casnewydd
Caerdydd
www.caerdydd.ac.uk

21 April 2021

Sami Alanazi
Cardiff University
School of Healthcare Sciences

Dear Sami

Research project title: An Exploration of the Emergency Staff's Perceptions and Experiences of Teamwork and the Skills required in the Emergency Department in the Northern Border Province of Saudi Arabia

SREC reference: REC784

The School Of Healthcare Sciences Research Ethics Committee reviewed the above application at the meeting held on 15 April 2021.

Ethical Opinion
The Committee gave:

> a favourable ethical opinion of the above application on the basis described in the application form, protocol and supporting documentation.

Additional approvals
This letter provides an ethical opinion only. You must not start your research project until all appropriate approvals are in place.

Amendments
Any substantial amendments to documents previously reviewed by the Committee must be submitted to the Committee via HCAREethics@cardiff.ac.uk for consideration and cannot be implemented until the Committee has confirmed it is satisfied with the proposed amendments. You are permitted to implement non-substantial amendments to the documents previously reviewed by the Committee but you must provide a copy of any updated documents to the Committee via HCAREethics@cardiff.ac.uk for its records.

Monitoring requirements
The Committee must be informed of any unexpected ethical issues or unexpected adverse events that arise during the research project.

The Committee must be informed when your research project has ended. This notification should be made to HCAREethics@cardiff.ac.uk within three months of research project completion.

Appendix 8: Permission from Northern Health Affairs in Saudi Arabia

وزارة الصحة
Ministry of Health
صحة الحدود الشمالية

سعادة / مدير البرج الطبي بالشمال — المحترم

السلام عليكم و رحمة الله و بركاته

إشارة للبحث المقدم من طالب الدراسات العليا / سامي سليم العنزي من كلية (كلية العلوم الصحية) جامعة كاردف ببريطانيا المملكة المتحدة الموضح بالجدول ادناه

اسم الباحث	Sami Saleem Alanazi
رقم الباحث	[redacted]
اسم الجهة	جامعة كاردف بالمملكة المتحدة
اسم المشرف	-
المشاركين	-
عنوان البحث	An Exploration of the Emergency Staff's Perceptions and Experiences of Teamwork and the Skills required in the Emergency Department in the Northern Border Province of Saudi Arabia
مدة الموافقة	سنة من تاريخه

نفيد سعادتكم انه بعد الاطلاع و دراسة منهجية البحث من قبل اللجنة المحلية لأخلاقيات البحوث بمنطقة الحدود الشمالية المسجلة لدى اللجنة الوطنية للأخلاقيات الحيوية برقم (H- 09-A-51) انه لا مانع من اجراء البحث في منشئات وزارة الصحة .
مع مراعاة الاتي :-

1- اتباع قوانين اللجنة الوطنية للأخلاقيات الحيوية و الطبية
2- عدم تأثير الخدمة في المرافق الصحية المعنية
3- المحافظة على حقوق الاشخاص الخاضعين للبحث وخصوصيتهم و الحصول على الموافقة بعد التبصير من المبحوثين لعمر 18 و موافقة ولي الامر لمن هم دون 18 عام
4- استخدام المعلومات في اغراض البحث العلمي فقط
5- في حالة أي تغير في خطة البحث يجب الحصول على موافقة من اللجنة المحلية لأخلاقيات البحوث بمنطقة الحدود الشمالية
6- الالتزام بتزويد اللجنة بنسخة نهائية من البحث او ورقة منشورة متضمنة النتائج
7- الالتزام بتسجيل النتائج النهائية للبحث بموقع الوزارة moh.gov.sa (خدمات البحوث)
8- توقيع اتفاقية تبادل المعلومات مع مزود الخدمة و تسليمها للجنة بعد التوقيع

مع أطيب تحياتي و السلام عليكم و رحمة الله و بركاته

رئيس اللجنة المحلية لأخلاقيات البحوث بمنطقة الحدود الشمالية

الدكتور /

الصادر / مكتب/ اللجنة المحلية لأخلاقيات البحوث

الرقم : ١٩٣٦٥١٥ التاريخ : ١٤٤٢/١٠/٢٩ المشفوعات :

مطابع صحة الحدود الشمالية - عرعر

www.moh.gov.sa | 937 | SaudiMOH | MOHPortal | SaudiMOH | Saudi_Moh | Public_arar

Appendix 9: The Interview Transcription and Probable Questions

Can you provide an overview of yourself, please?

I have a Higher Diploma in Emergency Medical Science and another in Management. I have been working in hospitals for eight years now, and I have been assigned two different positions throughout my career.

Can you please give more details about your roles and responsibilities?

The first was as a hospital technician, which made up five years of my total experience. My responsibilities at that time included taking part in the admission and discharge of patients and ensuring that all rooms adhered to health regulations and sanitation. It was also a part of my job description to help patients with their daily activities, monitor their medical state, and check their vital signs regularly. In case of any abnormalities, I used to immediately inform the registered nurse or doctor.

What do you do for work now?

I am currently an ED duty manager. The responsibilities that come with this position require an individual with effective leadership skills.

What are the effective leadership skills?

Effective leadership skills are those that the leader can use to communicate, motivate his/her team, listen to feedback, and solve problems in the workplace.

What do you do during your shift?

My common duties include supervising staff members (doctors, nurses, technicians). I observe their performance and provide support where needed to avoid complications.

How do you ensure the smooth flow of operations?

For example, if I find out that a particular employee is exhibiting poor job performance or is not staying on task, it is my duty to address this problem and impose disciplinary actions. Moreover, I coordinate with staff members and prepare schedules to ensure the ED is always adequately staffed.

Can you give an example of how you impose disciplinary actions?

I start with verbal warnings such as “If you continue neglecting your job duty, I will report you to the hospital’s management.” This can make them work, and there will be discipline. If the staff are neglectful, this will double the tasks on the other staff, and you will feel that we

have a shortage of staff. I would say that the duty manager must have a strong personality and be able to manage his staff so staff members will be satisfied.

Who is your manager that you follow?

The hospital manager and sometimes I follow the medical manager; the leader is the hospital manager. Sometimes, I need to email him or send a letter about something, such as the visitors' gate being open and the visitors sometimes causing overcrowding in the ED.

How does a shortage in staff affect patients?

A lack of staff can often lengthen the patients' stay, thus resulting in their frustration and dissatisfaction. Besides, a hospital that has a high patient-to-staff ratio is more likely to experience high mortality rates. For example, if you have ten patients, you cannot serve them in one hour; you will need two hours, which will delay the service. Normally, you will have defects, but if you have the required number of staff, you will serve the ten patients at the right time. This also will cause patients to wait in the waiting areas for hours. The second thing I would like to add is that the staff will be exhausted because when they finish with a patient, they immediately go to the other patient and so on, looking at this patient and this patient, so this will make them exhausted. Even in the future, the staff will not have the ability to maintain passion at work. I can see that the biggest obstacle we face is the shortage of staff.

It is the duty of the hospital's management to consider the shortages and the deficiencies if they want to solve this issue.

Does your position require you to deal with patients regularly?

Of course, communicating with patients and visitors is something I find myself called upon to do frequently.

How does this enhance the patients' experience?

As a director, listening to the patients makes me notice any patterns of deficiencies. I then use this data to instil positive changes in the facility.

Can you provide examples, please?

Sometimes, patients complain about the delay in receiving services. In this case, I start to look at why there is a delay in the service or the treatment. Usually, this is because of staff shortages. If we have more patients, we start to call staff from the intensive care unit to help us if they are available. They come and help; this is what happens.

From your perspective, what does teamwork mean?

A healthcare team consists of professionals who come together to contribute to treating patients.

Who are these professionals?

Physicians, nurses, administrative staff, and technicians.

Do you work within a team?

Yes, my team includes several specialised individuals, such as doctors, nurses, radiologists, and lab technicians.

As a director, can you describe the responsibilities of your team members?

I will discuss how doctors and nurses work as a team. A doctor's primary role is to administer the patients' treatment. This is done by closely examining the patients and diagnosing their illnesses or injuries. On the other hand, nurses help conduct diagnostic tests and physical exams. They are also responsible for recording patients' medical histories and symptoms. In other words, the nurse collects all the necessary information the doctor needs to diagnose. This is what I like to refer to as collaborative care. The doctors and nurses each have different responsibilities, scopes, and limitations, but they share the same purpose of providing patients with high-quality healthcare.

How about the radiologists and lab technicians?

The doctors write orders to them. Each nurse is responsible for some patients, and the nurses take the patients to them; if the patients are able to go, but the patients are not able to go, radiologists and lab technicians come to perform their work.

How do they communicate with each other?

They use paper to communicate with each other. The physician writes the order on a paper and gives it to the nurse. Then, the nurse takes it to the radiologists or the lab technicians.

How would you define effective communication between team members?

Communication is one of the vital signs of a high-performing culture. However, communication has to be effective to yield positive outcomes.

What makes communication in the ED effective?

As you know, the ED is a very stressful and unpredictable environment. This stress may cause team members to misinterpret each other, thus developing personal conflicts and

misunderstandings. As a team leader, I constantly remind my members that effective communication is more about listening than talking. Active listening is also very different from the simple act of hearing.

How does listening help develop effective communication?

When you learn how to become an active listener, you will become able to notice the slightest intonations in someone's voice. Those intonations help you read a person's emotions and make you less likely to misinterpret what they say.

Do your team members only communicate verbally?

Of course not. Nonverbal communication is equally effective, especially in the ED. For example, a particular concern might be that a doctor and nurse may not want to share with the patient yet. Their body language or facial expressions will be their cue in such cases. Moreover, in crisis cases, nonverbal communication becomes the standard form of communication between team members. To be able to understand body language or facial expressions, you need to have good experience with the team and have a close relationship with them.

Can you give an example of the body language or facial expressions?

Let's say a bus has rolled over, and a great number of patients were admitted all at once. Communicating verbally in such conditions will be ineffective because the ED is overcrowded, and shouting orders just makes the experience more stressful for everyone. Therefore, body language or facial expressions here help to speed up the communication. For example, you can understand the facial expressions of the physicians; if they look frustrated or need help here you can make a faster decision and help. Also, if the doctor has pointed to a specific corner to you with his or her hand, you understand that quickly and help the physicians as well as the patients. If team members do not change and stay with each other in the ED for months or years, they can understand each other.

How long do they need to stay with each other to understand nonverbal communication? I estimate more than a year. Sometimes, if the physician is wearing a mask and there is overcrowding, you cannot hear everything from the physician, so you need to use body language.

Do you think a mask can impact the communication?

Yes, of course. I expect the mask to have a small effect.

Does a mask impact you when you communicate?

It is a good question. Sometimes, it can have a small impact. For example, if you have more cases in the emergency department and you hear a lot of orders among the beds, and when there is a group accident, you will hear more sounds, such as the devices and the physicians and the nurses, and you have to focus with the physicians by using your ears and your eyes.

Do you think that is a barrier?

It is a simple barrier, and I do not think this barrier exceeds more than 5% if we talk about the percentage.

If the technology increased in the department, the communication would be better. Verbal communication is indispensable, and I do not think verbal communication will end. Our government provides us with new programmes that increase e-communication each time. There are negative things when the system crashes, such as no internet connection or power outage. When you do not use paper communication for a long time, the work will be interrupted, and there will be a delay because you depend on communication programmes to send and receive orders. This will result in confusion in the hospital. In this case, you need a backup plan where you have enough papers and are ready to use them. The positive thing is the pace; you do not need to walk for longer distances or you go to the second floor.

What are some common barriers to effective communication that your team faces, and what language do you use?

Most of the time, we use the English language. In fact, there is a cultural barrier that I am personally aware of on my team. Having members from diverse backgrounds is very rewarding yet challenging when it comes to communication. Different backgrounds mean different languages, work ethics, values, etc. Cultural barriers can sometimes make team members feel like they do not blend with the dominant culture.

Can you give examples, please?

Sometimes foreigners use different vocabulary when you talk with them, or they have different interests such as different jokes or they like different food. These differences make the relationships fragile because you have different interests, so there will not be something in common between you and them.

How do you deal with such differences?

I can see these differences make gaps among team members. We can look for common things, such as the patient's treatment; we keep talking about the work. You find I have a good relationship with Saudis because we have the same interests that's why.

How about language barriers? How do you overcome these?

It is nearly impossible to reach a common understanding with someone who doesn't speak your language. That's why we ensure the selected candidates can use English fluently when hiring our staff members. This helps ease communication between our bilingual members and abolishes language barriers in the ED.

Can you give me an example of how you face challenges in the language?

My colleagues and I faced some challenges. For example, when the physicians talk about a medical term that you do not know so at this moment, you start to look at the staff around you to ask for a translation. I remember the first time when I joined my job. The physician told me to please give the blade; at that time, I had another understanding of this term. I thought blade meant a form or a paper and the staff around me were laughing because this is a simple thing, and I had no idea about it. You know that medical terminology differs from other daily terms we use.

How about if that physician asked in Arabic; would you understand that?

Yes, of course. I would say that, to be honest, not everyone is fluent in English; there must be question marks in English conversations.

How, can you give examples?

Sometimes, when I talk to a foreign nurse, I don't understand everything she has said or sometimes I find it difficult if I want to talk about something; at this moment, I call an Arabic physician who understands English for translation. I remember another example of one time an Arabic patient came to the ED. He was suffering from a urinary catheter, and the patient could not explain to the foreign nurse about his issue due to the language difference. At this moment, the patient will need you as a manager and an Arabic speaker for translation to the foreign nurse, and this will be difficult for me to translate because I do not have the appropriate vocabularies because this is not my native language. Also, if the patient said I have burning sensations in my throat, this would be difficult to translate. I will need more sentences and body language to describe it to foreigners.

How do you feel when you work in a team?

When I work with the team, I learn more about the system and the procedures faster. I always talk with the staff, and I learn from their experiences, and we exchange information. For example, I learned many medical terminologies from the staff. Also, when I work with a team, I feel happy.

Why do you have this feeling?

When I work with a team, we share happiness as opposed to being happy alone. When you have a cardiac arrest case and when we perform cardiopulmonary resuscitation (CPR) and bring the patient back to life, this is a beautiful feeling that is difficult to describe to you. Everyone in the team feels the ecstasy of happiness.

In your opinion, what's good teamwork like?

When building a team, regardless of the job, a leader must first take the time to ensure that all the members possess certain qualities and traits. A perfect candidate is a team player, a good communicator, dependable, self-motivated, etc. I can say that the team member must not be new to the profession. This team member needs time to understand the others. The first thing, the experience must be there at least if you want to make a good team in the ED. Second, the appropriate number of staff. This makes the team successful.

If the team members have experience and there is an appropriate number of staff, how will this impact the services?

This will positively impact the services because they have enough experience to know how to serve the patients and give orders. Also, the team are able to understand all the procedures and the system in the ED. The new staff always look back at how to deal with the procedures and the system. For example, if there is a new physician who does not understand the blue code when this code will end or the Cardiopulmonary Resuscitation (CPR). Medically, the period of CPR is 40 minutes, and then you stop about one hour or 40 minutes, and then you announce the death. If a new physician comes, he/she may continue for 50 minutes, which is wrong.

How would you describe a weak team?

I believe that a team, whether strong or weak, is a reflection of the leader. A leader must be able to set clear expectations and goals for the team. If the members can’t figure out if they are meeting objectives, they will eventually become unproductive and will begin delivering low-quality services. Also, a weak team is a team that doesn’t receive feedback from the leader. Effective feedback helps members understand their weaknesses and strengths. It also

helps them know when they are excelling or falling short. This highlights the areas they can improve to enhance the quality of their work in the long run. In addition, staff satisfaction in the workplace. If the manager presses them for a certain number of hours, this will negatively impact them and the patient. When a good leader knows how to create an appropriate schedule for the staff, the staff will ultimately be satisfied. Sometimes, the manager makes an inappropriate schedule that they dislike; it is normal for them not to be satisfied during the work.

Have you received any type of teamwork skills training before? If yes, what are they?

I always find myself in a position where I need to improve myself to succeed in my role; consequently, I regularly attend any available training programmes.

Can you give me a few examples?

The latest training programme that I attended was called Building High Performance and Creative Teams. The three-day programme emphasises how humans work and learn much more effectively when in groups.

How did that programme help your team?

As a leader, I learned that to be a good leader, I had to do less talking and more listening. Listening made my team members feel more valued and appreciated, allowing me to see the bigger picture of every discussion.

What's your responsibility on the team? And what skills do you usually bring to the team?

I think I bring an ambitious and upbeat attitude. My ambition led me to become an Emergency Department Duty manager. I also bring effective communication. I could overcome many complex issues by clarifying things with my team members or patients. Not to forget to mention, my role is administrative; thus, my job requires administration skills.

How do you bring effective communication?

The most important thing is that I listen to the staff, and I let them speak about what they think and how they feel. If you let them speak, that will help get out their issues or concerns. Then I start to talk and use language that helps them understand, such as making my words understandable, and I show them respect, such as respecting their opinion. This is what I usually do.

Do you see this way as effective when you deal with the staff?

Yes, they like it this way, and they respect me.

So, what would you say is your primary role as an administrator?

I would say organising and planning. I ensure that workflow is running smoothly and that the patients receive the best treatment.

How do your administration skills positively impact your team members and patients?

I always ensure that the ED is not running low on staff. Lack of staff is a common occurrence, but I always proceed by asking for immediate backup from the other departments to avoid any possible complications. Besides, I regularly inspect storage rooms to ensure all supplies are available. Adequacy in the number of staff and supplies is proportionally related to patient satisfaction.

Do you have a fixed job description?

As a duty manager, I always find myself doing new things every day due to the unpredictable atmosphere of the ED. However, I have a certain job description that I follow. My responsibilities include managing the staff members. As I mentioned before, I observe their performance and provide effective feedback to ensure patients receive high-quality healthcare. The manager sometimes needs to improvise, which is allowed if you want to solve the issues, so don't interfere too much with the system. The goal of the Ministry of Health is that the patient is first.

So, you mean sometimes you think out of the box?

Yes, exactly.

Can you give me examples, please?

Also, I interact with patients to measure satisfaction levels and develop action plans that help improve the ED.

What plans can you give me some examples?

Yes, sometimes patients do not understand why the staff spends a little time with them in the ED. Then, the patients are dissatisfied with the staff and complain because there was a misunderstanding about the procedures. I start to go to the staff members and talk about this matter, and I try to let them speak more with the patients until everything is clear. For example, when patients and their relatives come to the ED, they are stressed and want to get the treatment as soon as possible and leave the hospital. They think we are not busy and don't think about other patients. So, they became mad and start to say bad words to the staff.

Do the staff listen to you and find this helps the patients and the team?

Of course, they listen, and when they explain things to the patients clearly, they don't just make the patients satisfied; they also will be happy because their patients are left happy, and everything is clear. If the patients are unhappy, they will create a bad environment in the ED, and that will impact the team's mood.

How and what happens to the team?

The team members will be nervous and unhappy, which could impact communication; we will see poor communication among the team members if they are in a bad mood. Also, when the staff finish their shift and go home, they will keep thinking about the bad behaviour of the patients.

Do you prefer to work in a team or independently, and why? Please give some examples.

This question doesn't have a definite answer. In the ED, however, teamwork isn't a choice but an obligation. It is the foundation on which everything else is built. Being supported by a team reduces the adverse outcomes that can happen when providing patients with healthcare. It takes more than one person to ensure the patient's safety, and that's why we invest so much time and effort into creating strong teams.

Can you back this theory up with an example?

I once had a very ambitious nurse technician on my team. As you know, it is the technicians' job to move and lift patients when necessary, but we make sure they do so in teams to prevent any possible injuries. The technician was a competitive individual and wanted to prove that he didn't need backup from his coworkers, so he lifted a very heavy patient on his own. On the same night, this technician was admitted to the ED. He injured his back while lifting the patient and ended up with a damaged disc. This did not only teach him the value of teamwork but also jeopardised his career as a nurse.

What about you, do you prefer working individually or in a team?

I am who I am because of the team I work with. I think being with the right team is what makes this experience even more joyful.

How?

During the shift, you come and have staff that are willing to help, and you talk with them and ask questions and sometimes we make jokes and laugh. This makes the shift great, and the staff are excited to work.

What's the right team like?

The right team consists of individuals who believe that there is strength in their union. I mean, we all have strengths and weaknesses. In a successful team, an individual's strengths are treated as a complement to his/her counterparts' weaknesses.

Also, I would add that the manager should be close to the team members, listen to them, and know their schedule and tasks exactly. Also, the manager should know about their personal issues, I mean if they have family issues of other issues. It is better if the duty manager has permission to allow the staff to leave if they have issues preventing them from working or impacting their feelings.

What teamwork skills are required in the admission areas of the ED that you see?

As I mentioned before, when hiring, we tend to look beyond the degree that the candidate has. Many personal skills are necessary for a successful career as a healthcare worker. One of the most essential skills is stress management. As we all know, the ED is a stressful environment, and there are lives at stake literally all the time. Healthcare workers, as a result, are at a high risk of burnout. Thus, they must have proper stress management practices and techniques to be able to cope and thrive with the constant pressure of their demanding job. Another essential skill is work ethic. ED shifts are unpredictable and can often go beyond 24 hours, so the employees must have a strong work ethic. Moreover, teamwork and effective communication are required in the ED. Our members must know how to collaborate with each other to ensure the patients' safety.

What do members need to develop personal skills?

I would say effective feedback. I mean, no one is perfect. A member may be a great communicator and team player but can't cope well with stress. In such cases, the leader must point out the areas where he is excelling and failing to the member. The team leader must also offer solutions such as training programmes, self-development courses, or even therapy sessions.

What are the barriers and the enablers of working in a team? Please provide examples.

As I said before, there are cultural and language barriers within the team, which is a normal occurrence in teams whose members are of diverse backgrounds. For example, coming a few minutes late to a meeting in Saudi Arabia is common. However, members of other cultures might find this lack of punctuality intolerable. Every incident is interpreted differently by

different cultures. These diverse interpretations can lead to conflicts and misunderstandings in the workplace.

How do you overcome cultural barriers?

I simply explain the acceptable cultural behaviours. For example, being late is not a quality I tolerate in the ED, with all due respect to cultural differences. Moreover, I try to organise cross-cultural training programmes every once in a while.

How do these programmes help your diverse team?

These programmes educate members on how to deal with their diverse coworkers and how to act in case of misunderstandings. Also, I would say some staff are not able to provide help or work in a humanitarian place because they lack the required skills or capabilities to do so. How? He feels unhappy and doesn't want to communicate with the patient, and I want an administrative job or to stay away from the patient. He feels that he is not able to provide services to the patient. Some of the staff do not provide the needed services to the patient. This is due to the personalities of the people, and not all of them love humanity.

How about the enablers you face when you work in a team? Can you state some of those? I think having a diverse team is considered an advantage in the ED. This is because many of the patients we admit aren't Saudi nationals. This means that they might not be able to communicate effectively using Arabic or even the English language. Moreover, most of the ED visitors are elderly. This makes communication even harder. Having staff members of diverse backgrounds means that many bilingual individuals are always willing to make the patients' experience easier and more effective. Besides for communication, a multicultural team is more likely to have a wide selection of different skills. When these various skills are combined, the outcome is always positive and in the patient's best interest.

Also, if the physicians or the nurses see that they have support from the management to protect them from the patient because the patient is not an angel who does not make mistakes and is not always responsive, sometimes the patient insults the physicians and the nurses. In this case, if the staff sees that there is support and that the patients defend them, this will satisfy the staff. In my opinion, this is one of the enablers that I can see. I would say that the duty manager must have a strong personality and be able to manage his staff. The staff member will be satisfied. This will help the staff not to hesitate to complain or report any patient when there is a loud voice or inappropriate behaviour. They report or send this patient

to the duty manager, and the staff member goes back and dedicates himself to his work and leaves this matter to a supportive manager.

Also, we want English language programmes to develop our English.

I mean, what enablers do you have?

When we avoid the barriers mentioned to you, that will be great. For example, when we do not have shortages of team members, the team manager has created an appropriate schedule for the team members to have their rights, such as their holidays. This will help you to find the team's spirit.

What do you mean by the team's spirit?

They will be happy with each other, and they will perform their work. Sometimes, the shift finishes, and we don't realise that we finish, and we don't feel tired. This is because of the team's spirit, the happiness among us, the collaboration. I believe that if any manager or any leader asks their team from time to time, sometimes there will be a member in the team who lowers the team morale, and they have to remove this person and put him in another place. Maybe this person is not suitable to work with the ED team.

Did this happen in the ED?

Yes, sometimes we give this person some advantages to let him leave the ED to not disrupt the team. To be honest, during the shift, some members bring tea and coffee, and they sit in the nursing room. I forgot to tell you that nursing rooms or any rooms for that staff are one of the positive things to relax in this room and take a break because this is our second house. I will spend my life in this place; I need to be satisfied to produce. Sometimes, we do not have patients, and we are free; what prevents us from sitting in this room and drinking a cup of tea?

When sitting there and drinking a cup of tea, what will you feel about work?

You feel that you are comfortable, and that will make you excited to work.

Can you give some examples of when you work closely and effectively with the team?

I feel closest to the team when a code blue is announced. We usually call code blue when a patient goes into cardiac arrest. It's like announcing that a particular patient needs resuscitation. Of course, we have an immediate response team for such occurrences.

Who makes up the response team?

A specialised internal medicine doctor, an anaesthesiologist, and an adequate number of nurses and technicians.

What's your role during a code blue situation?

A code blue literally means that the patient is in a critical situation. This puts any person accompanying the patient in a very stressful situation. It is my duty to empathise with them. How do you do that?

I always call them into my office and offer them some water or a refreshing drink. I, then, start acting as a connection between them and their loved ones. I do so by constantly updating them on the patient's condition and by providing them with therapeutic consultations in case the patient passes away.

What else do you do?

Also, sometimes you have an injured group, and the team needs some support, such as they want me to call the warehouse guard to have some equipment. At this moment, you need to be with the team to support them.

Did you encounter conflicts or challenges within your team? How did you handle them?

Yes, of course. Conflicts are a natural occurrence in the workplace. Different people have different personalities and work styles.

Can you give me an example, please?

Sometimes, a patient comes to the ED and has complicated health issues and some diseases. You do not know if they are medical or surgical, and here the conflict happens; the internist says to the surgeon this case is your responsibility, and the surgeon says no, this needs the internist. At this moment, we call the medical manager and explain the case to him; after that, he will decide if the case is medical or surgical.

As a team leader, I always try to keep calm and listen to all different perspectives before imposing any disciplinary measures. The ability to resolve conflicts is an essential skill of successful leadership. I must always be available to resolve conflicts in a professional and timely manner to prevent any defects in productivity.

What is one challenge you faced as a director?

When I was first assigned as the ED Director, a particular employee constantly undermined my authority. His behaviour disrupted our teamwork and affected the smooth flow of work. At first, I used to ignore his actions, but then one of my superiors advised me to be more

attentive instead. I started trying to develop an understanding of the situation and what triggers my employee's behaviour. Listening and paying attention helped me in resolving this conflict. Of course, in other cases, you might need to set consequences to instil discipline into a team.

What do you think makes a team effective? Please provide reasons.

From my perspective, a well-rested team is an effective team. Leaders must be considerate when distributing the workload. A smart leader is a leader who's fully aware of his members' skills and assigns them tasks that are within their capabilities. Moreover, an effective team is established on trust and support. Supportive environments give members the freedom to express themselves and ask more questions. Asking questions adds to the members' knowledge and enhances their performance.

As a director, how would you define leadership?

A leader is a figure that everyone in the team looks up to. This is why the success of any team depends entirely on the leader. An effective leader can boost productivity and inspire members. Leadership, however, requires specific skills like active listening, decision-making, effective communication, critical thinking, etc.

How do you inspire members?

I always listen to them. I have to be flexible in answering any question, whether the patient or the team members ask, and be humble and knowledgeable about the work. I try to ask them if they are satisfied with the schedule and to ask if they need help with anything.

Can you give me an example of the decision-making?

For example, patients come to the ED to remove stitches, and we can't help them with that. Based on the physician's decision, I tell the patient to go to the primary health care centres because they are working. At this moment, if we serve this patient, we will delay the services to other patients who really need the emergency department and also double the work on the team. Here, the decision-making helps the team, and I know a lot of managers do not tell the patients and do not make such a brave decision. We always face patients who do not really need the ED, and they overcrowd the ED. Non-emergency cases can exhaust the team and make them tired, and when the actual emergency cases come to the ED. Sometimes, patients lie that they are sick and they really need the ED.

Can you give me honest feedback on this interview? Did the questions meet the general requirements of the ED's work setting?

Your questions were comprehensive and precise. You were actively engaged in the conversation, and your regular comments emphasised your broad understanding of the subject. I honestly felt for a second that these questions came from the heart of the ED. You highlighted every perspective of this demanding job and listened effectively to what I had to say.

Would you like to add anything else to this conversation? Not necessarily a question but maybe a general comment or request.

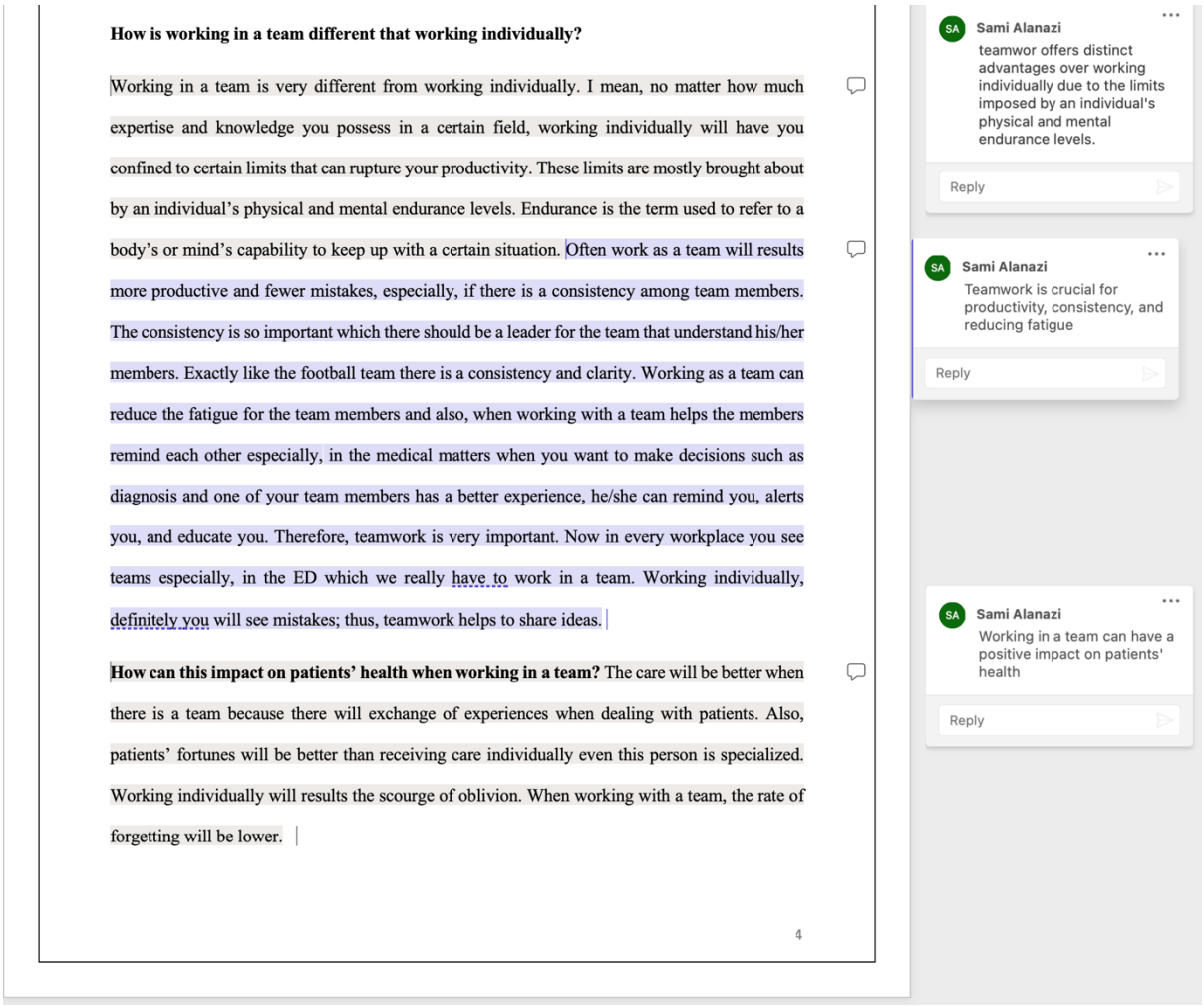
See, that's what I am talking about. You make the participant think out of the box and use critical thinking to answer your questions. Actually, I do have something to add. It is just that I hope hospital management becomes more concerned about the administrative staff's well-being. This can be done by organising regular polls and surveys. These will ensure that the directors have all the resources needed to ease their workflow and enhance their well-being.

Do you think you have a lack of resources?

What I mean is that medicine is a very complex and rapidly growing field. If you want to provide high-quality care for the patients, you must keep up with this growth.

Thank you for participating in my study.

Appendix 10: Coding Process



How is working in a team different that working individually?

Working in a team is very different from working individually. I mean, no matter how much expertise and knowledge you possess in a certain field, working individually will have you confined to certain limits that can rupture your productivity. These limits are mostly brought about by an individual's physical and mental endurance levels. Endurance is the term used to refer to a body's or mind's capability to keep up with a certain situation. Often work as a team will results more productive and fewer mistakes, especially, if there is a consistency among team members. The consistency is so important which there should be a leader for the team that understand his/her members. Exactly like the football team there is a consistency and clarity. Working as a team can reduce the fatigue for the team members and also, when working with a team helps the members remind each other especially, in the medical matters when you want to make decisions such as diagnosis and one of your team members has a better experience, he/she can remind you, alerts you, and educate you. Therefore, teamwork is very important. Now in every workplace you see teams especially, in the ED which we really have to work in a team. Working individually, definitely you will see mistakes; thus, teamwork helps to share ideas.

How can this impact on patients' health when working in a team? The care will be better when there is a team because there will exchange of experiences when dealing with patients. Also, patients' fortunes will be better than receiving care individually even this person is specialized. Working individually will results the scourge of oblivion. When working with a team, the rate of forgetting will be lower.

4

SA Sami Alanazi
teamwor offers distinct advantages over working individually due to the limits imposed by an individual's physical and mental endurance levels.
Reply

SA Sami Alanazi
Teamwork is crucial for productivity, consistency, and reducing fatigue
Reply

SA Sami Alanazi
Working in a team can have a positive impact on patients' health
Reply

Appendix 11: Example of Thematic Analysis Coding

	Multicultural Teamwork	Codes		
2	Sub-theme One:Gender Segregation	Male-Female Communication Challenges	Same-Gender Preferences for Routine Care	Gender Segregation Policies
3	Sub-theme Two: National origin discrimination	Language Barriers in among internation staff	Unequal Treatment Based on Nationality	Language Barriers in Communication

Appendix 12: Theme, Sub-themes, and Codes

A	B	C	D	E	F	G
Theme: The organizational factors	**Codes**					
Sub-theme one: Deficiencies in the Management	unresponsive management	Discrimination- unjust-job category- salary	Supervisor's solution and unresponsive management	Nepotism-unfair management practice	Barrier ineffective management	Barrier- unfair management practice.
Sub-theme two: Shortages	Main issue staff shortages and supervisor's responsibility	Main problem shortage	Enough number of staff and supplies make patient satisfied	The hospital's management considers the shortages	Leader's responsibility Staff shortages solution	
Sub-theme three: Work Shifts	Flexible working hours in the ED is a facilitator and support mental health and reduce absence rates.	The positivity of the ED environment improves the well-being of patients and the staff to enjoy working.	Barriers- working and the shifts in the ED impact the health of the staff.			

Appendix 13: Conformation of the Originality of the Study in KSA

المملكة العربية السعودية
إدارة الإيداع النظامي

مكتبة الملك فهد الوطنية
King Fahad National Library
www. kfnl.gov.sa

إفادة

الموضوع لم يتم بحثه

اسم مقدم الطلب	Sami Saleem Alanazi
بريد مقدم الطلب	[redacted]
التاريخ	29/02/1446
اسم الجامعة	Cardiff University
الدرجة العلمية	دكتوراه
موضوع البحث	AN EXPLORATION OF EMERGENCY STAFF PERCEPTIONS AND EXPERIENCES OF TEAMWORK IN AN EMERGENCY DEPARTMENT IN THE KINGDOM OF SAUDI ARABIA

الختم

مكتبة الملك فهد الوطنية
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مدير إدارة الايداع النظامي

[redacted]

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