An Investigation of Near-Peer Learning in Simulation-Based Education and Its Influence on the Professional Socialisation of Adult Nursing Students

This thesis is submitted to Cardiff University in the fulfilment of requirements of candidature for the degree of Doctor of Education (EdD)

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Summary

This study examines how peer learning embedded within simulation-based education influences the professional socialisation of adult nursing students. Professional socialisation is a critical process through which students develop professional values, behaviours, and identities. However, increasing pressures within clinical practice can result in disillusionment, where students encounter a disconnect between taught ideals and the realities of care delivery, which can lead to negative socialisation.

Simulation and peer-to-peer learning have become prominent pedagogical strategies in healthcare education, yet there remains limited understanding of their combined effect on shaping professional identity within simulation-based settings. This research addresses this gap through a qualitative case study conducted at Cardiff University, involving first- and third-year nursing students. Simulation scenarios were co-designed for authenticity, and data were collected using post-simulation questionnaires, debriefs, and semi-structured interviews with newly qualified nurses who had participated six months prior. Thematic analysis was undertaken using NVivo 12.

Findings indicate that simulation created meaningful opportunities for critical reflection, peer interaction, and identity formation. Junior peers reported increased confidence, empowerment, and a heightened sense of belonging, while senior peers described a deeper sense of readiness for professional practice. Key themes such as empathy, collaboration, and self-assurance emerged as essential attributes fostered through peer-supported simulation.

This study contributes to the body of knowledge on professional identity development in nursing education, highlighting peer learning in simulation as a valuable tool for fostering socialisation in a safe and supportive environment. It recommends the systematic integration of peer simulation into undergraduate nursing curricula to support both the early development of professional values and the transition from student to registered nurse.

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Dedication

I dedicate this thesis to my parents, my children, my sister, and my partner.

To my Mam and Dad, thank you for pushing me, believing in me and for being my rock.

To my sister, Marie, you are an inspiration, strong and determined, and always there for me, like I'm there for you.

To my two boys, Joshua and Ollie, I hope this inspires you to believe anything is possible. Dream big boys and reach for the stars, you are both amazing and I'm proud to be your Dad.

To my partner Jean, thank you for your support, your kick in the backside when needed and for a cwtch when times got a little tough. Thank you also for your patience, love and for being my best friend.

I love you all very much.

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Completing this doctorate has been a roller-coaster experience; at times exciting and fulfilling, at others very frustrating and tiring. I am extremely proud to have completed this thesis, but also recognise that without the support of supervisors, colleagues, students and family, I would not have reached this stage.

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Chapter 1: Introduction to thesis

1.1 Context of the Thesis

Over the past few decades, healthcare delivery has undergone significant transformation, driven by demographic shifts, technological advances, and changing consumer expectations (Bullock et al, 2012). Nursing, once viewed primarily as a caring profession (Abbott and Meerabeau, 1998), has evolved into a recognised and respected profession, as highlighted by the Royal College of Nursing's (RCN) latest definition that describes nursing as a safety-critical profession founded on four pillars: clinical practice, education, research, and leadership (RCN, 2024).

A key figure in this evolution was Florence Nightingale, who, during the mid-19th century, led reforms that elevated the social status of nursing (Rosser, 2016). Nightingale recognised the potential for nursing to provide personalised care through critical thinking and autonomy, which set the stage for nursing's professionalisation. However, the journey to professional status was long and challenging, as nursing worked to meet the criteria for professionalism, such as autonomy, altruism, self-regulation, and expertise, qualities that distinguish professions from other occupations (Friedson, 1970; Fletcher, 2006).

The Nursing Registration Act of 1919 was a milestone, establishing different registers for various nursing specialties and creating the General Nursing Council, which later evolved into the United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC) in 1979, and then the Nursing and Midwifery Council (NMC). These governing bodies played a crucial role in maintaining the nursing register and setting standards for nursing education, leading an evolution in nursing education, progressing from certificates to bachelor's, master's, and doctoral degrees. This transition, particularly the introduction of Project 2000 in 1986, marked a major shift, recognising nursing as an all-graduate profession and aligning it with the changing needs of healthcare delivery (UKCC, 1986). The Project 2000 initiative aimed to develop nursing practitioners capable of meeting the complexities of

modern healthcare. Shifting from an apprenticeship model to an academic one signified a significant step towards nursing's professional status, which acknowledged that to meet the growing needs of patients, nurses required the knowledge and skills to deliver evidence-based care.

In recent years, the NMC's (2018b) Standards of Proficiency for Registered Nurses have further evolved the nursing role, incorporating technical skills such as venepuncture, chest auscultation, and prescribing medications, tasks once restricted to physicians but now increasingly performed by nurses. These standards anticipate the evolving needs of the public and suggest a future where nurses hold greater autonomy and expertise, central to their professional identity (NMC, 2018b).

As nursing continues to evolve, Higher Education Institutions (HEIs) have revalidated their programs to align with NMC requirements. The NMC's newly published Standards Framework for Nursing Education (2023a) and updated Standards for Student Supervision and Assessment (2023c) offer innovative, flexible approaches to nursing education, aiming to empower future nurses. As part of their Bachelor of Nursing (BN) in Adult Nursing, students are required to complete 50% of their program in clinical practice and 50% in the university setting, totalling 4600 hours. This is a universal requirement across universities in the UK and a stipulation of the NMC (2023a), as such, failure to complete the required hours means students cannot graduate or register with the NMC, thus excluding them from the profession.

During the theoretical component of their program, students engage in a variety of learning opportunities, such as seminars, lectures, and clinical skills sessions, and their knowledge is assessed through written assignments, presentations, clinical skills assessments, and examinations. Additionally, over the past decade, simulation-based education (SBE) has become a widely used learning strategy, both in academic and practice settings (Hallmark and Johnson, 2024), with recent strong support from the NMC (2023b). In clinical practice, students are required to complete an All-Wales portfolio (Health Education and Improvement Wales (HEIW), 2022), which assesses their knowledge, professionalism, and reflective practice, alongside their achievement of clinical proficiencies. At HEIs, students receive support from

Academic Assessors, who evaluate their clinical portfolios, and Personal Tutors, who assist with both academic and practice-related issues.

In clinical practice, students are also supported by Practice Assessors and Practice Supervisors (referred to as mentors in this thesis), who supervise, support, and assess students in the clinical environment (Pearce, 2023), creating learning opportunities tailored to the students' level of understanding. Historically, mentors were required to work 50% of their placement with students (NMC, 2008), but the new standards for student supervision and assessment (NMC, 2023c) no longer specify a minimum time. Nonetheless, these roles remain essential for supporting the students' development in the clinical learning environment, which is widely recognised as crucial for developing both clinical competence (Mathisen et al, 2023) and professional identity (Mao et al, 2021), which is shaped through professional values.

Nursing is one of the most trusted professions, deeply rooted with professional values and ethics (Chongloi et al, 2024), which are subsequently considered within nursing professional standards and represented in detail within student nurses' core competencies (NMC, 2023a). Derived from the code of ethics, they represent the fundamental values expected from nurses within and outside of the clinical arena, guiding decision making and behaviour with an aim of providing care that is both professional and safe (Antoniou et al, 2022). Furthermore, professional values of students can affect their principal and practical thinking skills in ethical dilemmas (Bektas, 2022) and support nurses in their decision-making, reducing moral distress, and supporting them to represent nursing care in a positive manner.

1.2 Rationale for the Study

Students' professional values and identities are shaped through professional socialisation, a process where they are immersed in both academic and clinical environments, adopting the values and behaviours of the profession (Moon and Chang, 2023). Professional socialisation requires appropriate guidance and learning within the clinical setting, as students' development depends on both support and

role models to help them develop essential skills, including collaboration (Price et al, 2021) and clinical competencies (Gazaway, 2019). However, research suggests that due to the pressures in clinical practice, students may experience disillusionment and disappointment with the reality of the work environment (Thomas et al, 2015). Furthermore, research suggests that their professional socialisation is not being adequately supported (de Swardt, 2019), and there is a risk of being socialised into accepting a decline in care standards (Hunter and Cook, 2018).

Over the past decade, the NHS, where students primarily undertake clinical placements, has faced constant strain, with high-profile inquiries, such as the Mid Staffordshire inquiry (Francis, 2013), leading the public to question the integrity of the NHS and the competence of healthcare professionals. Lord Francis, who led the Mid Staffordshire inquiry, reported that the NHS trust had prioritised financial efficiency over patient care (Ramsey et al, 2022), had inadequate staffing levels (Ball, 2020), and exhibited a tolerance for poor standards (Francis, 2013). More recently, Lord Darszi (2024) raised concerns about increased waiting times and an aging population, which continue to challenge the NHS.

The shortage of healthcare staff exacerbates these concerns, with the Royal College of Nursing (RCN) (2023a) reporting that the nursing and midwifery workforce grew by just 7% between 2017 and 2022, resulting in 2,717 nurse vacancies in Wales alone (RCN, 2023b). Additionally, in 2022, the Welsh Government (WG) reported a 8.9% vacancy rate for registered nursing staff in Wales, while the UK Parliament (2024) reported a vacancy rate of 10%, representing 42,300 unfilled positions in England. These shortages mean that nurses are often caring for as many as 15–20 patients each (RCN, 2023a). The Health and Social Care Act (2008) mandates that healthcare providers ensure sufficient qualified, competent, skilled, and experienced staff to meet patient's needs (Care Quality Commission, 2023), but the challenge of recruiting and retaining healthcare professionals remains.

In response, the Welsh Government introduced the Nurse Staffing Levels Act (2016) to protect staff levels (WG 2016), but evidence of its effective implementation remains limited (Twigg et al, 2021). The impact of understaffing is profound, with 26.4% of nursing staff reporting that they are unable to perform their duties properly,

which has a detrimental effect on patient care and safety (NHS England, 2022; Brooks Carthon et al, 2019). De Swardt (2019) further reports that overcrowded environments present significant challenges to students' learning, with some students being asked to cover staff shortages (Gemuhay et al, 2018), leading the RCN (2024a) to declare a crisis in working conditions and the quality of support available to students.

In an effort to increase the nursing workforce, successive Welsh governments have invested heavily in undergraduate nursing education, significantly increasing the number of students requiring clinical placements, however, since the Covid-19 pandemic, the number of students applying for nursing programs has decreased (Palmer et al, 2023). Additionally, nurse attrition is a national issue (Su et al, 2023), with many nurses leaving the NHS due to stress and burnout (Moon, 2023), while attrition rates for pre-registration nursing students are also concerning, ranging from 24% (The Health Foundation, 2018) to 33% (Jones-Berry, 2021). Attrition is a complex issue influenced by various factors, however negative placement experiences are often a key reason why students leave nursing programs (Eick et al, 2012), with lack of support and high levels of stress cited as contributing factors (Health Education England, 2022).

Beyond placement experiences, research suggests that many students leave nursing programs because they feel unprepared for the expectations of the nursing role, often lacking the psychological and practical resources needed to cope with both theoretical and clinical challenges (Canzan et al, 2022). Offering adequate support to students is particularly challenging due to their diverse backgrounds, ranging from prior experience in the care sector to academic preparation, as well as the pressures of balancing work and family life (Kukkonen et al, 2015). As such, to mitigate attrition rates, it is crucial to foster a supportive social environment and a sense of belonging to the nursing profession, ensuring that students feel empowered to continue their studies (Soerensen et al, 2023). To address this challenge peer support is recommended to reduce attrition and enhance students' resilience (Krautscheid et al, 2022; Crombie et al, 2013).

Resilience is defined as the “capacity to effectively cope with, adjust, or recover from stress or adversity” (Burton et al, 2010, p. 266) and is a vital trait for nursing students to successfully complete their programs (Gause et al, 2024), which in turn improves retention (Lopez et al, 2018). Resilience is built through meaningful relationships, such as peer-to-peer support and family networks, which help strengthen students’ coping abilities and self-confidence (Labrague et al, 2018). A sense of belonging, supported by peer relationships, further enhances resilience, but there is often a lack of peer support, leading to calls for initiatives that foster social connections and peer support to boost resilience (Lee et al, 2019).

The development of students’ personal identity is also an essential aspect of resilience (Maddock and Oates, 2022), with research suggesting that focus should shift from merely acquiring skills to the formation of professional values and identity (Thomas and Asselin, 2018). Historically, a key part of any nursing program is the internalisation of professional norms and ethical standards, which constitute the professional culture (Fagermoen, 1997), however, over the past decade, the landscape of healthcare education has changed significantly. Given the increasing number of students, creating innovative teaching models remains a challenge for higher education institutions (HEIs), with traditional lectures still serving as the cost-effective mode of delivery for standardised content (Hilli, 2014). The stress from global events like the COVID-19 pandemic, along with the rigorous demands of nursing programs, highlights the need for HEIs to cultivate an engaging culture that promotes student well-being and resilience (Heath et al, 2022). Subsequently, experiential learning, including simulation-based education (SBE), has become an increasingly important approach.

SBE, which offers a safe environment for learning and developing both technical and non-technical skills (Leal-Costa et al, 2024), has gained considerable traction in nursing education (Vagone et al, 2024). Simulation is an effective tool for bridging the gap between theory and practice (Newton and Krebs, 2020) and has been proposed as a substitute for clinical placements due to the ongoing shortages of clinical placements, increased student numbers, and limited patient availability (Gough et al, 2012). Although simulation may be as effective as traditional practice hours in helping students acquire key skills and knowledge (Hayden et al, 2014), the

success of experiential learning depends on the quality of the experience students undertake. Due to the variety of clinical settings, students' experiences can vary depending on the placement and the enthusiasm of their supervisor (Cant et al, 2021), while SBE has the potential to ensure that all students have a similar learning experience, shaped by their own motivation and enthusiasm to learn.

The benefits and challenges of replacing clinical placements with simulation have been explored in other healthcare professions (Partner et al, 2022), with simulation being used flexibly to meet students' learning needs while preparing them for future practice during the COVID-19 pandemic (Williams et al, 2022). In mental health nursing, it has been suggested that 25% of clinical hours can be replaced with simulation (Soccio, 2017), while Hayden et al (2014) propose that up to 50% of clinical hours can be replaced in nursing programs in the USA, which require students to complete up to 868 practice hours, varying by state (Garrow et al, 2022). In the UK simulation-based practice hours have been utilised by the NMC who introduced recovery standards to support HEI's during the COVID pandemic, proposing up to 600 hours of simulation-based education could replace clinical practice hours (NMC, 2022), and is seen as an approach which adds significant value to students practice learning experience (NMC, 2024).

SBE is recognised as a valuable tool for providing students with opportunities to learn with and from each other, with peer learning in simulation being an effective teaching strategy (George et al, 2020; Dalwood et al, 2020; Curtis et al, 2016). Given the pressures faced by the NHS, simulation-based education may offer a way for students to develop their professional identity while working collaboratively in a safe, authentic environment.

1.3 Structure of the study

To contextualise and answer the research questions (see Chapter 2, subsection 6), this thesis is organised into six chapters. Chapter two provides a comprehensive review of the literature, focusing on professional socialisation in relation to the development of students' professional values and identity. The chapter also examines the critical role of the mentor within the clinical environment, a key actor in

supporting students. Additionally, the chapter discusses the evidence base for incorporating SBE as a teaching strategy in the development of students enrolled in pre-registration programs. The role of peer learning as an effective intervention is also explored.

Chapter three outlines the research methodology employed throughout the study, detailing the five-stage data collection process, which integrates triangulation and rigor to ensure validity. The chapter also addresses the sampling approach, strategies for data collection, and the use of thematic analysis to organise and interpret the data. Finally, ethical considerations and the importance of trustworthiness are discussed, with an emphasis on the role of reflexivity throughout the research process.

The findings of the study are presented in Chapter four, categorised under four emerging themes identified through the data analysis: the simulation-based environment, the role of the peer mentor, the learning process and finally, student's feelings and confidence.

Chapter five provides an in-depth discussion of the study's results, offering interpretations that reflect on how the findings contribute to the understanding of students' professional socialisation. These findings are organised into three themes: optimal settings for optimal professional socialisation, the near peer experience in simulation and finally developing the attributes of as professional nurse.

Finally, Chapter six concludes the thesis by summarising the research findings and their implications for future work in the field, drawing connections between the study's objectives and broader educational and healthcare contexts. The chapter also offers recommendations to enhance students' professional development and socialisation, and study limitations are recognised.

Chapter 2: Literature Review

2.1 Introduction

This chapter provides a critical appraisal of the literature relevant to the key areas underpinning this study. It begins by exploring the concept of professional socialisation through empirical research, examining how nursing students develop professional values and identity within both academic and clinical contexts. Given the pivotal role mentors play in shaping students' professional development in practice settings, literature addressing the influence of mentorship is also reviewed.

To further support understanding of professional socialisation within the academic context, literature on simulation-based education is reviewed, highlighting its potential to replicate clinical practice within an authentic yet controlled learning environment. Finally, the chapter evaluates research on peer learning, positioning it as a valuable educational approach for enhancing students' professional development and learning experiences.

2.2 Search Strategy

A literature review is a crucial element of the research process (Thomas 2021), as such a structured and systematic search strategy was developed to identify literature relevant to the aims of this study, and to ensure a comprehensive and transparent review of existing evidence. Four distinct literature searches were conducted, aligned with the following sub-headings: professional values, identity and socialisation; the role of the mentor; simulation-based education; and near-peer learning.

Details of the electronic databases searched and the search terms used are presented in Appendix 1, Boolean operators were used to maximise the retrieval of relevant literature (Polit and Beck, 2017). Search terms within each conceptual grouping were combined using "OR" and then linked across concepts using "AND" to generate the final search strategy. To ensure a focus on contemporary evidence,

searches were limited to publications from the previous ten years, however, due to the extended duration of the study, searches were repeated at key stages to incorporate newly published literature.

Inclusion and exclusion criteria were applied to ensure alignment with the study aims. Included papers were empirical research studies involving undergraduate nursing students, published in English, and directly relevant to the research question. Additionally, international literature was included to provide a broader global perspective on key concepts. Studies were excluded if they focused on post-registration nursing students, were non-empirical in nature, or comprised unpublished dissertations or discussion papers. A systematic and supplementary search approach was employed, including hand-searching reference lists and citation tracking to identify additional relevant studies.

2.2 Professional Values, Identity and Socialisation

As a key aim of this study is to explore the professional socialisation of pre-registration nursing students, a critical appraisal of the literature on the development of professionalism is essential for contextualising the thesis. Accordingly, this section evaluates research concerning the development of students' professional values and identity.

Nursing, as a profession, is fundamentally underpinned by core values (Baillie and Black, 2014), most notably the six Cs: care, compassion, competence, communication, courage, and commitment (NHS England, 2012). These values form the foundation of professional nursing practice (Department of Health, 2012) and are explicitly tied to the expectations set out in the NMC Code (NMC, 2018), which calls for students to demonstrate professionalism and trust.

Values are shaped by personal needs and experiences (Li and Li, 2024) and provide a moral framework that influences nurses' behaviours (Lana et al, 2024), as such, they are vital to ensuring high standards of care (Brickner, 2024). Moreover, professional values serve as guiding principles during ethical dilemmas (Gassas et

al, 2024) and are shaped by both individual and environmental factors (Aydin et al, 2022), which can also affect students' well-being, at times resulting in anxiety and psychological distress (Devakani et al, 2019). These values are often communicated through both verbal and non-verbal behaviours (Aydin et al, 2022), further highlighting the significant role nurse education plays in guiding and shaping students' professional values (Kanek et al, 2017).

Consequently, one of the primary aims of nurse education should be to support the formation and development of professional values (Kaya et al, 2025), ensuring that the principle of care remains central to professionalisation and the broader concept of professionalism (Carvalho, 2014). Both higher education institutions (HEIs) and clinical placements share responsibility in fostering these values (Nel, 2024), aligned with the expectations of the NMC code (NMC, 2018). However, the NMC Standards for Nursing and Midwifery Education (Nursing and Midwifery Council, 2018b) mark a significant evolution in nurse education, reflecting the growing need for advanced knowledge, autonomy, and leadership, and representing a shift from the historically task-oriented view of nursing (Godfrey and Joseph, 2023). Despite this shift, nursing must continue to balance the art and science of care to deliver safe, high-quality, patient-centred healthcare (Grobbel et al, 2016), while also nurturing students' professional identity and values.

Professional identity can be defined as the process of thinking, feeling, and acting like a nurse (Godfrey and Joseph, 2023), built upon a core set of professional values and ethics that inform professional conduct. It can be regarded as a fixed asset gained by novices during the early part of their training (Davies et al, 2011), which suggests professional identity is an acquisition rather than part of the socialisation development process. However, it is also suggested that professional identity develops gradually through reflection, insight into practice, and the internalisation of professional ideals and values (Gilvari et al, 2022), emphasising the importance of undergraduate education as a critical phase in this process (Lin et al, 2024).
It is proposed that nursing students may begin their training with preconceived ideas about the role of a nurse, shaped by personal experiences, professional encounters, or media portrayals (Weidman et al, 2001). However, research indicates that professional identity formation is influenced not only by values and ethics but also by

knowledge, leadership development, and professional comportment (Embree, 2024). The development of professional identity thus becomes a reflection of the student's unique way of being and acting in practice (Kira and Balkin, 2014), playing a vital role in bridging the transition from theoretical learning to clinical application (Ashby et al, 2016). Furthermore, strengthening professional identity may help students manage stress (Sun et al, 2016), particularly given its positive correlation with moral reasoning (Haghighat et al, 2020). Early and meaningful exposure to clinical placements also supports the cultivation of empathy (Wang et al, 2022) however, the development of identity is not without barriers. Inadequate clinical mentoring, overwhelming workloads, and a perceived lack of respect for the nursing role in some practice settings can hinder students' confidence and sense of preparedness (Mbalinda et al, 2024; Qin et al, 2024). It is therefore the shared responsibility of higher education institutions (HEIs) and clinical practice environments to foster students' professional values and acknowledge the influence of the hidden curriculum in identity formation.

The hidden curriculum refers to the unwritten, unofficial learning that occurs through cultural norms, values, and behaviours within academic and clinical environments (Raso et al, 2019). It comprises lessons not explicitly taught but communicated through role modelling, language, and practice, often conveyed by supervisors, lecturers, or peers (Allan et al, 2011). While the formal curriculum encourages reflection on values and professional conduct, the hidden curriculum further shapes professional identity by exposing students to real-world practices and unspoken norms (Kelly, 2020). Peer learning is one such domain where valuable, informal learning occurs, as students learn from observing and interacting with more experienced colleagues (McKenna and Williams, 2017). Moreover, the hidden curriculum continues to impact the professional development of newly qualified nurses, who frequently encounter discrepancies between formal values and workplace realities (Hunter and Cook, 2018). These challenges contribute to evolving professional behaviours through reciprocal interactions between the environment, personal characteristics, and actions, hallmarks of Bandura's (1977) social learning theory, central to the process of professional socialisation.

Professional socialisation is the process through which students internalise new knowledge, skills, attitudes, behaviours, values, and ethical standards, integrating them into their evolving professional identity (Mariet, 2016). This journey involves aligning one's personal beliefs, emotions, and values with those of the nursing profession, forming part of a continuous developmental process (de Swardt, 2019). Frankland (2010) encapsulates this by describing socialisation as a process that addresses the questions: "Who am I, Where do I belong, How do I fit in" (pg. 34), and is a construct that merges personal values and beliefs with both societal and professional expectations (Cingel and Brouwer, 2021).

Professional socialisation during undergraduate education plays a critical role in shaping a nurse's future trajectory serving as either a supportive foundation, or a potential hindrance depending on personal, academic, and professional influences (Salisu et al, 2019). According to Melrose et al (2021), this process comprises two main components: organisational socialisation, where students adjust to the structural and cultural context of healthcare environments by building relationships and navigating hierarchies; and professional socialisation, in which students internalise the values and ethical norms that define nursing practice. While medical socialisation has been historically described as the adoption of a cloak of competence, implying emotional detachment and performance (Hass and Shaffir 1987), in nursing it is understood as a more holistic and transformative process, where individuals are deeply immersed in the moral and ethical framework of the profession (Kantek et al, 2017).

To conceptualise the process of professional socialisation in nursing, several theoretical models have been developed to describe how students transition from laypersons to professional practitioners. Cohen's (1981) model, developed specifically for nursing students, outlines four developmental stages: unilateral dependence, negative/independence, dependence/mutuality, and interdependence. These stages reflect a student's increasing capacity to engage critically, take initiative, and internalise the values and norms of the nursing profession. Importantly, Cohen (1981) presents professional socialisation as a non-linear and continuous process, shaped by experience, reflection, and interpersonal relationships.

Complementing this, Bandura's (1977) Social Learning Theory underscores the importance of observational learning, particularly through role modelling, guided practice, and feedback. Bandura suggests that students learn new behaviours by observing the actions of credible role models, retaining what they observe, and then reproducing these behaviours in practice. This learning process is not passive; it requires motivation and conscious intention on the part of the learner to emulate selected professional behaviours and characteristics (Mariet, 2016). Within the context of nursing, clinical placements provide rich environments for this type of learning, where experienced nurses serve as powerful role models.

In addition, Benner's (1984) Novice to Expert model offers further insight into the developmental trajectory of professional competence, identifying five progressive stages: novice, advanced beginner, competent, proficient, and expert (Benner, 1984). This model emphasises the role of experiential learning and practical knowledge in the development of clinical judgement and professional identity. As students gain experience, they move from relying heavily on rules and instruction to applying intuition, contextual understanding, and flexible thinking in their practice. Taken together, these models suggest that professional socialisation in nursing is not a single event, but a dynamic, ongoing process involving cognitive development, skill acquisition, and identity transformation. Cohen (1981) highlights the psychological and value-based transitions; Bandura (1977) explains how behaviours are learned through interaction with the environment and role models; and Benner (1984) describes the deepening of clinical competence through experiential learning over time.

Furthermore, Weidman et al (2010) proposed a model of professional socialisation, conceptualising it as a developmental and interactive process shaped over time by both individual characteristics and environmental influences. Building on this foundation, Weidman and DeAngelo (2020) introduced a 21st-century model of socialisation in higher education, presenting a more comprehensive framework for understanding student development. This updated model, depicted in Figure 1 below, features two horizontal circles and one vertical axis, symbolising the dynamic, multidirectional nature of socialisation, with each circle representing the student or their communities of influence (Weidman and DeAngelo, 2020).

Furthermore, the model identifies four interconnected stages of socialisation: anticipatory, formal, informal, and personal, each contributing uniquely to the development of the students' professional identity. The anticipatory stage involves students' initial awareness, preparedness, and attitudes towards their future roles, shaped by prior experiences, media portrayals, and interactions with professionals, or as Crow (2006) suggests; any care experience which may have already developed professional values, which are further developed as part of the learning process. Formal socialisation begins within the university context, primarily through structured engagement with the nursing curriculum and faculty guidance, where students are encouraged to think, act, and reflect as nurses (Gazaway, 2019). In contrast, informal socialisation emerges through unstructured experiences, such as observing peers, faculty, and clinical staff in academic and clinical settings, which significantly influence the internalisation of professional norms and values (Gardiner-Shires et al, 2023). While formal socialisation is deliberate and curriculum-driven, informal socialisation is subtle and often unintentional, allowing students to absorb the profession's culture organically (Hampton et al, 2021). The personal stage marks the point at which students begin to internalise their professional identity through self-reflection, gradually reconciling their prior self-image with the values and expectations of their emerging role as nurses (Weidman et al, 2020).

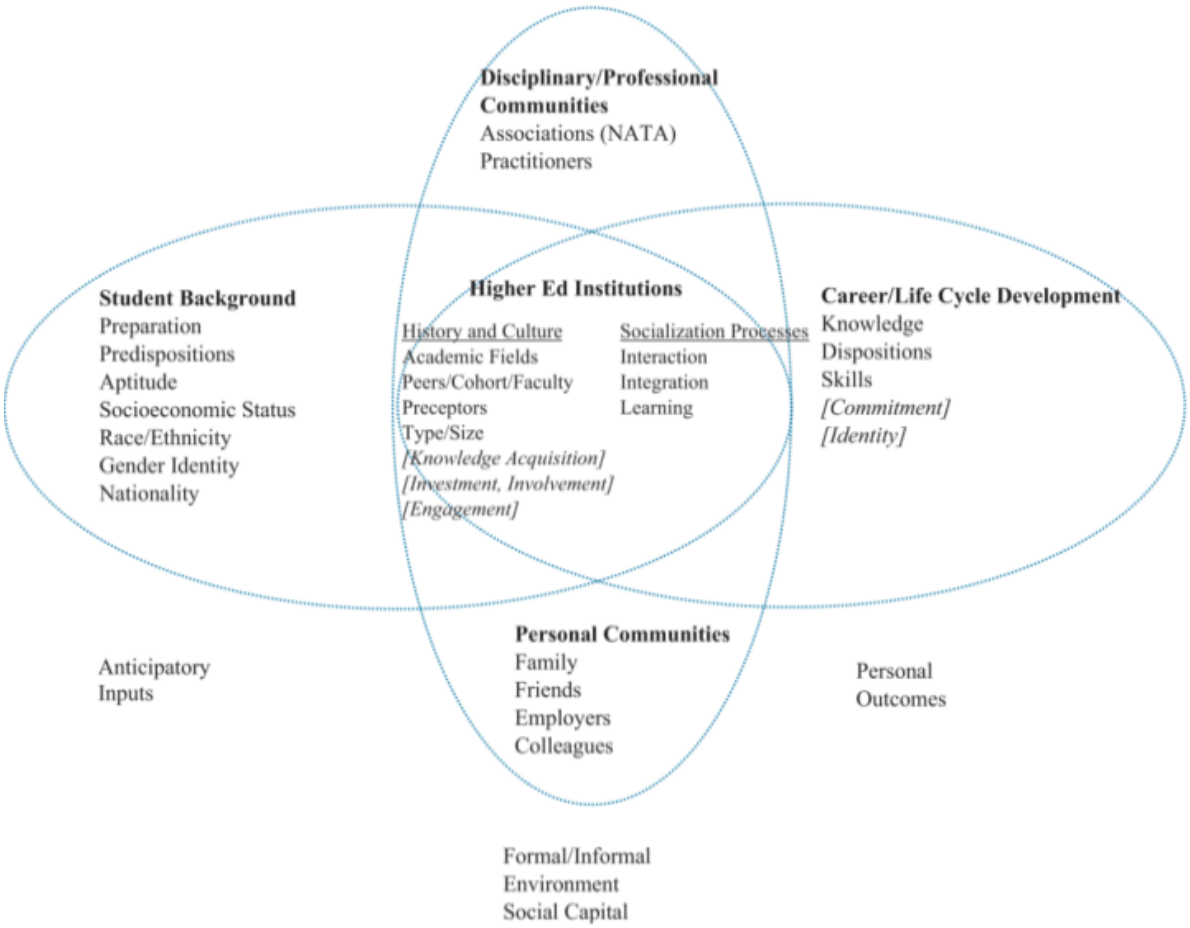


Figure 1: Conceptualizing Socialisation of Students in Higher Education (Source: Weidman and DeAngelo 2020, p. 314)

On the left side of the figure are the inputs, which refer to the predispositions, prior experiences, and expectations students bring into the programme, while at the centre of the model is the university environment, representing students' experiences within the professional programme, particularly relevant in nurse education. These experiences are shaped through interactions with peers, faculty, and preceptors, whereas the socialisation process further involves the interaction, integration, and learning of professional skills and knowledge, core components that support the transition into professional roles. Within the higher education institution, four key elements are emphasised: knowledge acquisition, investment, involvement, and engagement. These elements collectively contribute to students' identification with and commitment to their future professional roles.

Higher education institutions are positioned at the centre of the intersecting ellipses in the model, signifying their pivotal role as the primary environment where student socialisation takes place. It is within this setting that other influential factors, such as professional and personal communities, interact and shape both the student's development and their experience within the nursing programme. On the right side of the model, Weidman and DeAngelo (2020) present the end result of effective socialisation: a graduate who has acquired the essential knowledge, attitudes, and skills to function competently in their professional role. This framework offers a valuable lens for academic programmes, highlighting that graduate students undergo a continual process of socialisation, beginning at admission and evolving throughout their transition into professional practice, characterised by ongoing reflection and adaptation.

The literature presents contradictory evidence regarding the inclusion of curricular content designed to develop students' professional values. While Gilvari et al (2022) argue that higher education institutions (HEIs) need to make greater efforts to promote the professional identity of nursing students, Antoniou et al (2022) report compelling evidence of curricula that explicitly focus on developing professional values. What is clear, however, is that nursing students occupy a unique position, caught between the discourse of the nursing profession and the identity of a 'university student' (Jackson and Steven, 2020). In contrast, transformative educational approaches that incorporate professional judgement, reasoning, and self-reflection are reported to be critical in shaping students' professional identity (Mbalinda et al, 2024). Moreover, immersive and authentic experiences, alongside reflective learning, are also recognised as influential (Li and Li, 2024), as demonstrated by Kelly et al (2024), who found that highly immersive simulation enhanced graduates' communication skills and autonomy.

It is suggested that professional socialisation occurs primarily in the practice setting rather than the classroom (Brown et al, 2013), however, workplace socialisation is complex and arguably dependent on variables such as the quality of clinical supervision, the positivity of the practice experience (de Swardt, 2019), and the nature of the student-supervisor relationship (Gazaway et al, 2019). Therefore, while both theoretical and practical components are essential, the process of professional

socialisation and identity formation arguably begins with exposure to academic ideals and is further shaped by clinical practice (Hunter and Cook, 2018), where students experience the realities of professional nursing (Maranon and Pera, 2015).

However, students often find that the realities of clinical practice may contradict what is formally taught in academic settings, making the process of learning to be a nurse inherently challenging (Hunter and Cook, 2018). Clinical pressures, including staff shortages, amplify the need for support from experienced mentors to help students develop their practice (Salisu et al, 2019). Within this context, the Practice Assessor and Practice Supervisor emerge as pivotal figures, offering professional insights that shape students' developing identities. Thus, the professional socialisation of student nurses is strongly influenced by social modelling from experienced practitioners (Wu et al, 2020), as well as by the leadership of clinical managers whose leadership is often tested by current workforce challenges (Norman, 2015). The mentor, therefore, remains a central actor in supporting the development of students' professional identity within clinical practice.

2.3 The Role of the Mentor

The role of the mentor within the clinical environment is fundamental, not only in assessing students but also in ensuring they are afforded meaningful opportunities to achieve their learning outcomes, subsequently their impact on students' confidence is significant (Baxter and McGowan, 2022). According to the Nursing and Midwifery Council (NMC, 2008), mentors are expected to facilitate, supervise, and assess students in clinical practice, however beyond these responsibilities, mentors also offer nurturing guidance through the provision of expert knowledge and emotional support (Perumal and Singh, 2022). Since their formal integration into nurse education following the transition of training into higher education in the 1990s (Rylance et al, 2017), mentors have held a pivotal role, responsible for up to 50% of a student's clinical assessment under earlier frameworks, such as the NMC (2008) standards. As such, mentors assume a critical gatekeeping function for the nursing profession.

Students often perceive clinicians as influential role models in shaping their future practice (Baldwin et al, 2014), with mentors exemplifying professional behaviours and attitudes that contribute directly to students' professional development (Felstead, 2013). As Casey and Clark (2011) note, mentors must navigate a delicate balance, offering supportive friendship while maintaining objectivity in assessment, as such a successful mentorship relationship is founded on openness, trust, and mutual respect (Kolawole et al, 2019). Moreover, mentors are instrumental in students' professional socialisation as they act as "identification mirrors," modelling the values, behaviours, and competencies that define what students do and how they grow as future professionals (Galletta et al, 2024).

Professional socialisation is therefore reinforced through the hidden curriculum through encounters with desirable and non-desirable role modelling (Hunter and Cook, 2018) both of which have a significant effect on student's professional values and identity. Students will see positive role models but will also see unprofessional nurses in practice who serve as negative role models or examples of how not to act professionally (Fitzgerald and Glukey, 2021) and are expected to navigate their experiences with an aim of understanding what it is to be a professional nurse. These inconsistencies in role models and subsequent practice are reinforced by variations in the attitudes of nurses (Mathe et al, 2021) and the quality of care they provide (Mpangane et al, 2021).

Additionally external factors also contribute to the complexity of mentorship in clinical settings, with Baxter and McGowen (2022) reporting that clinical staffing pressures and the fast-paced nature of practice environments reduce the quality time mentors can dedicate to student development. Moreover, the morale within a clinical setting plays a crucial role; the adverse impact of working in environments where staff feel undervalued or unsupported should not be underestimated (Saarikoskoski and Leino-Kilpi, 2002). Consequently, mentors may face challenging circumstances because of both internal and external pressures, in addition to their dual role of mentors and nurses (Srulovoci et al, 2023), which can affect the level of care provided to patients (Peiser et al, 2018) as well as the level of support offered to students.

In an effort to improve the mentorship process, the Nursing and Midwifery Council (NMC) introduced the Standards for Student Supervision and Assessment (NMC, 2018a), replacing the traditional mentor role with that of the Practice Supervisor and Practice Assessor, which marked one of the most significant changes in nurse education in decades (Donaldson, 2019). The practice supervisor role focuses on supporting student learning and can be fulfilled by professionals with current, relevant experience outside nursing. Conversely, the practice assessor is responsible for the student's overall assessment and must be NMC-registered (NMC, 2018a). While both roles contribute to the student's development and portfolio, the practice assessor relies heavily on feedback from practice supervisors to make informed assessment decisions.

This shift was largely driven by concerns over workload distribution, time constraints, and the pressures experienced by mentors in increasingly demanding clinical environments historically recognised by Mayall et al (2008). However, despite these reforms, concerns remain regarding assessors' willingness to fail underperforming students. This issue commonly referred to as "failing to fail", was initially highlighted by Duffy (2004), who argued that mentors often lacked the preparation and institutional support necessary to confidently manage such situations. More recently, Hughes (2021) reaffirmed that this concern persists, noting that some mentors continue to hesitate when it comes to failing underperforming students.

Although the separation of supervision and assessment roles, alongside the introduction of an academic assessor, was intended to mitigate this issue (Health Education and Improvement Wales, (HEIW), 2023), evidence suggests that the structural change alone may not be sufficient, with North et al (2019), suggesting that reluctance to fail students may persist. Further supporting this view, Butler (2025) proposes that early identification of students at risk of underperforming, targeted additional training, and the cultivation of a supportive learning culture are all-essential in addressing this persistent challenge. Furthermore, Hunt (2019) recommends mentors demonstrate traits such as integrity, dependability, and courage, underpinned by additional training as mandated by the NMC (2023c).

Additionally, the updated NMC Standards for Student Supervision and Assessment (NMC, 2023c) highlight that practice supervisors serve as role models for safe and effective practice. Although they do not directly assess students, they contribute to decisions regarding progression by working in partnership with the practice assessor to support the student's development. Within this context, the practice supervisor acts as a coach, facilitating learning and promoting student development (Leigh and Roberts, 2017), with the potential to enhance student-led learning and encourage learners to take greater ownership of their educational journey (Leigh et al, 2019).

Students may work with multiple practice supervisors throughout their placements, which not only offers varied learning opportunities but also alleviates some of the responsibility traditionally placed on the assessor. Notably, practice supervisors do not need to be registered nurses (NMC, 2023c), which supports the Royal College of Nursing's (RCN, 2017) affirmation of the profession's commitment to interprofessional learning and expanding the range of clinical placements available.

This model promotes a shared responsibility for student learning, aligning with Setati and Nkosi's (2017) assertion that mentorship is viewed by nurses as a collaborative effort. Support from colleagues helps reduce the burden of assessment (Natteroy et al, 2023), suggesting that mentorship has become a more team-based and cooperative endeavour (Whaley et al, 2023). Moreover, this new structure succeeds in separating the supportive aspects of mentorship from its evaluative components (Pearce, 2019) with Brand (2024) reporting that students who feel supported by a broader mentorship team experience improved clinical confidence and skills development. However, despite this collaborative model, the practice assessor retains the formal responsibility for signing off students as proficient; as such, students may naturally seek greater contact with their assessor, recognising their influence on their progression decisions.

The importance of mentors in clinical practice is widely acknowledged (Baxter and McGowen 2022), however, Tuomikoski et al (2020), through a systematic review of nurses' experiences of their competence, suggest that multifaceted mentoring skills are essential to effectively support students' learning processes. Concerns have also been raised regarding the generic nature of student proficiencies, which often

emphasise physical assessment and health at the expense of mental health training, a situation Warrender (2022, p.5) controversially describes as “an assault on Mental Health Nursing.” Additionally, mentors may struggle to interpret the language used to describe students’ learning outcomes, which can limit students' ability to demonstrate and achieve their proficiencies (Almalkawi et al, 2018). In response, the NMC (2020) recommends that practice assessors and supervisors receive adequate preparation and ongoing support. However, questions remain about whether all mentors possess the necessary skills and knowledge to support students in high-risk procedures such as venepuncture and chest auscultation, tasks traditionally performed by the medical profession. This was identified as a specific concern in Wales, with the HEIW (2023) proposing that students need to undertake simulation to practice high-risk skills such as cannulation and catheterisation, prior to practicing in the clinical arena.

Furthermore, while the transition from the traditional mentor model offers potential benefits, concerns persist about the growing responsibilities placed on nurses in student support, especially amid ongoing workforce shortages (Whaley et al, 2023), which can impact opportunities for nurses continued professional development (CPD). Wang et al (2024) found that although mentors often demonstrate adequate motivation and positive attitudes, their effectiveness could be improved through prioritised mentorship training and a supportive environment with structured activities. Future research should explore critical components of mentorship programmes, such as in-service training, to develop models that are more transparent and adaptable (Hoover et al, 2020). Additionally, Devlin and Duggan (2020) highlight the importance of role recognition, proposing that mentors should be acknowledged by ward managers, and supported by academic institutions for the essential role they play in student development.

The workplace experience plays a critical role in students’ assessment and progression; however, Devlin and Duggan (2020) also report the negative effect of low staff morale on the quality of mentorship within the clinical environment where students are placed. In addition to serving as a setting for developing practical skills and clinical competence, the workplace experience also plays a critical role in students’ assessment and progression. Consequently, placements characterised by low morale, poor clinical practice, and fragmented teamwork where staff appear

disjointed, and students focus primarily on ‘fitting in’ (Harrison-White and Owens 2018) can adversely impact both professional development and academic achievement. While recent changes to mentorship structures have shown promise, particularly through the introduction of Practice Supervisors, which promote greater student engagement with a variety of healthcare professionals (Brand, 2024), the consistency and quality of support across placements cannot be guaranteed. As Dewey (1995, p. 23) noted, “while all genuine education comes from experience, this does not necessarily mean that all experiences are equally educative,” highlighting the importance of ensuring that clinical learning environments are both supportive and conducive to professional growth.

2.4 Simulation Based Education

Although clinical placements are widely regarded as the ‘gold standard’ for gaining hands-on experience (Partner et al, 2022),) SBE has increasingly been used to prepare students for practice (Olasoji et al, 2020), replace elements of clinical practice (Williams et al, 2022), and supplement real-world experiences (Tuttle and Horan, 2019). While it is acknowledged that professional learning occurs throughout all clinical placements, SBE provides a valuable opportunity to support students’ professional socialisation within a safe, controlled, and authentic environment, while also exposing students to experiences they may have not encountered in the clinical arena.

There is a range of scholarship supporting the use of SBE as an effective tool to enhance the students learning experience and support clinical skills (Cant and Cooper, 2017), critical thinking, self-confidence (Stroup, 2014) and clinical decision-making skills (Gorucu et al, 2024). Health Education and Improvement Wales (HEIW) devised an all-Wales definition of simulation:

> *“Simulation is a learning tool that supports development through experiential learning by creating or replicating a particular set of conditions which resemble real life situations. It should provide a safe environment where participants can learn from their mistakes without*

> *any danger to patients, allowing individuals to analyse and respond to these realistic situations, with the aim of developing or enhancing their knowledge, skills, behaviour and attitudes."*
>
> *(Hawker et al. 2022)*

This definition reflects the aim and purpose of simulation activity, however another widely used definition defines simulation as a:

> *"...technique, not a technology, to replace or amplify real experiences with guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion"*
>
> *(Gaba, 2004 p. i2)*

This broader definition embraces the full range of simulation learning based activities and adds clarity by emphasising the importance of the student experience. Furthermore, the importance of realistic nature of the learning environment is proposed by Pilcher (2012) who suggest the authentic nature of the simulation allow participants to develop or enhance their knowledge, skills, and attitudes, or to analyse and respond to realistic situations, as well as supporting critical thinking and self-confidence (Stroup, 2014). Although critical thinking in nursing has historically been difficult to define (Noone and Seery, 2018), Shin et al (2015) describe it as a purposeful, self-regulatory process that involves interpretation, analysis, and evaluation. Simulation fosters experiential learning by immersing students in realistic clinical scenarios that require them to apply evidence-based practice through critical thinking and reflection. By using high-tech patient simulators, role play, and real patient interactions, simulation allows students to engage in authentic clinical encounters within a safe, controlled setting minimising risk to real patients. In addition to replicating common clinical situations (Gough et al, 2012), SBE can also expose students to rare or complex scenarios they may not otherwise encounter during placements (Gorucu et al, 2024), helping them to become more familiar with specific clinical environments (Hellaby, 2013).

Additionally, across higher education institutions (HEIs), simulation is increasingly used to support the development of students' decision-making skills (Hallmark and Johnson, 2023) and provides opportunities to cultivate critical thinking and teamwork (Reime et al, 2017), which are essential competencies for all healthcare professionals. Simulation based experiences also enhance students' evidence-based competencies (Leal-Costa, 2024), with the potential to improve the quality of patient care. Fundamentally, SBE benefits multiple facets of students' personal and professional development, with a key advantage being the freedom for students to make mistakes and learn from them in a safe environment (Society for Simulation in Healthcare, accessed 2024). Furthermore, simulation enables students to experience patient perspectives first hand by role-playing as patients, fostering empathy and deeper understanding of patient challenges (Chiu-Yen and Kuei-Min, 2012), which aligns with Dewey's (2015) findings that students' attitudes significantly improve through active participation and doing, rather than passive learning. Consequently, simulation immerses students fully in the learning process, moving them beyond peripheral observation and enhancing their motivation to learn (Theobald, 2021).

When considering students' impetus to learn, andragogy describes an adult-focused approach to teaching and learning (Nair et al, 2014), where students are self-directed, motivated, and learning is student-centred. The approach popularised by Knowles et al (2011) proposes a proactive approach to learning where enquiry and autonomy feature significantly and learning is student-centred, experience based and problem oriented (Decelle, 2016) requiring collaboration between the faculty and learners which is important for future professional performance (Draganov, et al 2013).

The application of andragogy builds on earlier work by Stienaker and Bell (1979), who emphasised experiential learning, where students are deliberately exposed to situations and experiences. This is underpinned by Dewey's philosophy that individuals' own experiences form the basis of true learning, and that students learn best through participation rather than passive listening or observation (Dewey, 2015), as such, learning is a process of doing, gaining knowledge through direct, hands-on experience (Hulse, 2018). Experience is thus the primary path to

knowledge enhancement, facilitating students' progression from novice to expert, as described by Benner (1984). This understanding is further developed through Kolb's (1984) experiential learning cycle, which highlights that adult learning is deeply connected to the application of practical knowledge and decision-making skills.

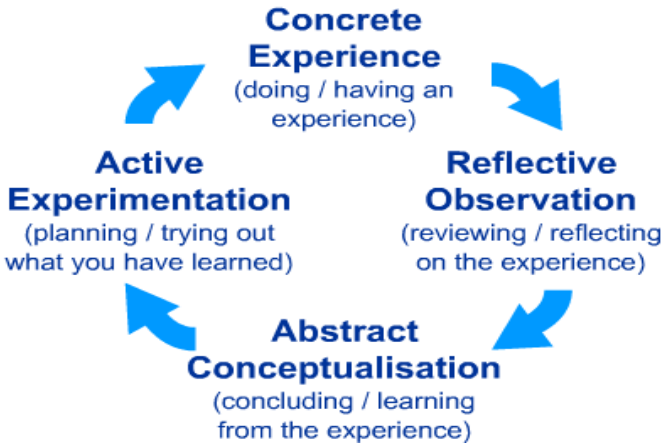


Figure 2: Kolb (1984) (Experiential Learning Cycle)

The cycle of experiential learning consists of four stages, proposing that the student moves sequentially from one stage to the next, progressing from the 'abstract' to the 'concrete' through reflective observation, as illustrated in Figure 2 above. Although students may enter the cycle at any point, they must follow the stages in order to achieve effective learning (Neary, 2000), which requires active participation and engagement in diverse experiences. Reflection is thus a multifaceted and purposeful process aimed at challenging current, past, and future practice (Burns, 2015), while critical reflection involves exploring and visualising alternative scenarios (Bolton, 2010).

Within nurse education, reflection is used as a process through which students learn from experience and apply that knowledge to evaluate and advance their practice (Parsons and White, 2008). Schön (1983), drawing on Dewey's work, distinguished between two types of reflection: reflection on action and reflection in action. For Dewey (2005), reflection in action was not merely thinking about an experience, but

an active process where a hypothesis is formed and tested through ‘doing,’ which generates new knowledge, thus, facilitating learning opportunities that allow students to engage in this process is key to active reflection. Bruner (1961), who also championed learning by discovery, emphasised that the structuring of learning material is essential for overall knowledge acquisition when introducing new content; as students grasp basic overarching concepts, they are empowered to explore the finer details independently (Bolton, 2010). This experiential taxonomy offers a coherent framework for course design and delivery, supplementing and strengthening other educational models (Nicklin and Kenworthy, 2000), aligning well with competency-based education approaches, where progressive levels of performance are assessed, and promotes reflection as a central learning strategy.

Simulation finds its theoretical foundation in Kolb’s (1984) theory of experiential learning (Cole, 2023), with the debriefing process being an essential component. Additionally, behaviourism plays a role in simulation by supporting the acquisition and repetition of specific skills or concepts within a controlled environment, guided by a facilitator (Parker and Myrick, 2009). However, the primary theoretical framework underpinning simulation as a teaching strategy is constructivism (Hallmark and Johnson, 2024). Constructivism posits that learning is an active process where students build new ideas or concepts based on their existing or prior knowledge (Brandon and All, 2010), extending the work of Knowles (1979). As a branch of cognitivism (Clark, 2018), constructivism is supported by theorists like Vygotsky (1978), who emphasised that students’ knowledge, skills, and behaviours develop through social interaction, fostering social development. Conceptual growth emerges as students share and reflect on their experiences (Brandon and All, 2010), encouraging them to construct knowledge during the learning process by engaging with real-world scenarios such as those in simulation that link new content to previous experience (Clark, 2018). These constructs are then critically examined during the debriefing phase, where students reflect on their experiences in alignment with Kolb’s (1984) experiential learning cycle.

Additionally, a key aspect of the constructivist approach is situating learning within opportunities that foster critical thinking, problem-solving, and decision-making (Neutzling et al, 2019). This emphasises that students in Higher Education

Institutions (HEIs) must actively engage with and take responsibility for their own learning (Valler-Jones, 2014); learning is not simply transmitted from facilitator to student but is developed by learners themselves as they construct new solutions and apply theory to practice (Holmstrom, 2019). This challenges simulation facilitators to create an organic connection between educational content and students' prior personal experiences, which in turn influences their future practice (Dewey, 1995, p. 23). When students perceive that what they are learning will impact their future clinical experiences, they are more likely to engage meaningfully with the simulation, thereby promoting professional growth. Therefore, facilitators must design simulations carefully to ensure that scenarios provide students with opportunities to develop effectively and achieve meaningful learning outcomes aligned with the educational objectives (Huffman et al, 2016).

When considering scenario design and learning outcomes, the Association for Simulation Practice in Healthcare (ASPiH) developed a revised Simulation-Based Education in Healthcare Standards Framework in 2023, following extensive consultation, which is now regarded as best practice in simulation (ASPiH, 2023). This framework outlines the essential attributes for designing and delivering effective simulation-based education and serves as a quality assurance guide for education providers. Central to its recommendations is the use of clear, effective learning outcomes and the appropriate timing of simulations (ASPiH, 2023), ensuring that students engage with simulation-based experiences that correspond to their current level of professional knowledge and competence, for example, foundational skills in the first year and more complex skills by the third year of the programme. This emphasis on the progressive nature of the curriculum aligns with Dewey's (2015) view on the importance of cumulative and connected experiences, highlighting the need for curriculum flow and careful planning of SBE that acknowledges Benner's (1984) novice-to-expert continuum through which students progress.

Additionally, the quality of the learning environment is critical to effective learning, hence, it is the facilitator's responsibility to cultivate and maintain a culture that fosters and nurtures learning. Knowles' (1984) andragogical principles emphasise setting the climate for learning, encompassing both the physical environment and the human, interpersonal dynamics, with key factors include an organisational climate of

mutual respect, collaboration, supportiveness, and openness (Quinn, 2013). These elements are also reflected in Maslow's (1971) hierarchy of needs, which posits that in order for students to achieve self-actualisation, they must first feel safe and secure. This can be facilitated by promoting a clinical learning environment characterised by friendliness and respect, where students feel supported and empowered to reach fulfilment and self-actualisation.

As previously suggested, the success of simulation largely depends on students' enthusiasm to fully engage in the process, as well as the facilitator's skill in creating authentic learning opportunities and outcomes that closely replicate clinical practice. It is essential that students understand the purpose and significance of the simulation; however, Patton (2014) notes that student engagement may diminish when they encounter uncomfortable or challenging situations. Given that simulation can be challenging, this presents a potential cause for concern (Cant and Cooper, 2009). Since SBE is viewed as a core component of the curriculum, students are expected to participate in various aspects of SBE, including role play and peer observation, which may provoke feelings of confusion or anxiety sufficient to impede optimal learning (Wotton et al, 2010). Nonetheless, as Dewey (1995, p. 45) suggests, facilitators have the ability to directly influence the learning experience and can respond to individual students' needs during the simulation. If a student feels overwhelmed, the facilitator can intervene and provide necessary support, highlighting not only the flexibility of SBE but also the critical importance of a strong student-facilitator relationship.

A key consideration in simulation design is determining the appropriate level of realism (INACSL Standards Committee 2021). However, it is proposed that the concept of realism alone is insufficient and Lioce et al, (2025) propose alternative descriptors of realism, such as immersion, which emphasises the learner's subjective sense of engagement and presence within the simulated experience. Simulation modalities vary considerably in complexity and approach (Altun and Tastan, 2022), ranging from low-tech manikins to high-tech simulators and simulated patients and Nestel et al, (2018) suggest there are no hard and fast rules regarding the realism of the simulation, suggesting a flexible approach. Consequently, educators are required to make informed and purposeful decisions regarding the

most appropriate simulation modality, guided primarily by intended learning outcomes (ASPiH, 2023) and supported by a comprehensive understanding of available simulation approaches (Cole et al., 2023).

Low-tech simulators, such as basic manikins, videos, or partial models like a torso for ECG practice, offer cost-effective solutions suitable for non-technical skills and allow students to learn at their own pace (Hill et al, 2023). Conversely, high-tech simulators are computer-controlled manikins capable of demonstrating realistic clinical signs, such as blood pressure and heart rate (Au et al, 2016) and have been shown to positively impact students' knowledge acquisition and performance (Vangone et al, 2024). However, although the use of high-tech simulators is integral to nurse education (Raman et al, 2024), its superiority over low-tech options depends on the learner's level and the task at hand (Munshi et al, 2015). Furthermore, since simulation is designed to mirror real-world clinical scenarios (Eyikara and Baykara, 2017), preserving humanistic interaction is crucial, often achieved through the inclusion of simulated patients (SPs), or 'human patients,' who engage students in realistic practice situations (Donovan et al, 2019). While some argue that rigorous research comparing the impact of SPs to other fidelities is limited (Rutherford-Hemming et al, 2019), evidence suggests that SPs improve communication skills, self-efficacy, problem-solving abilities, and learner satisfaction by enhancing patient engagement and interaction (Ma et al, 2023).

When considering the use of manikins and real-life patients in simulation, it is important to clearly define the learning objectives as SBE can be employed to develop students' clinical skills as well as their knowledge in areas requiring interpersonal interaction, such as moral reasoning (Kucukkelepce et al, 2020), cultural competence (Byrne, 2020), and principles of diversity (Karnitschnig et al, 2023). While technical skills like cannulation may have minimal impact when practiced on manikins (Dziri et al, 2024), real-life patients provide opportunities for students to practice 'softer skills,' such as communication and empathy, thereby enhancing the realism of the simulation and positively influencing knowledge acquisition and reinforcement (Uslu and Van Giersbergen, 2023). Although student satisfaction and self-confidence may be comparable across different simulation modalities (Altun and Tastan, 2022), simulations involving simulated patients are

particularly effective for enabling nursing students to develop care-providing skills tailored to specific patient groups, such as communicating with individuals with dementia (Akkurt and Dissiz, 2024). Since effective communication is essential when performing clinical tasks like taking a patient's history, using simulated patients instead of manikins can improve students' overall clinical practice and consequently strengthen patient care (Andrea and Kotowski, 2017).

Conversely, Ha Eun-Ho (2018) highlights potential limitations of using simulated patients such as students being distracted by the actions of the SPs, which may impair their focus on nursing performance, as well as the inability to practice technical skills like injections or catheterisation on a real person. Shankar et al (2016) further note that although students can interact flexibly with SPs, these actors are not real patients and thus cannot fully replicate the symptoms and conditions encountered in clinical practice, underscoring inherent limitations of simulation, while also emphasising the importance of adequately preparing SPs for their roles (Bozkurt et al, 2023). However, beyond the level of immersion required, factors such as effective student debriefing also play a critical role in shaping the learning experience.

To support an effective safe environment ASPiH Standards for Simulation-Based Practice (2023) state all activities must be initiated by a pre-brief and followed by a debrief. Pre-briefing aims to prepare learners for the educational content and make them aware of ground rules for the simulation-based experience, providing an opportunity to assist learners to commence problem solving regarding patient care (McDermott et al, 2021). However, within SBE debriefing is the lynchpin in the process of learning (Gardner, 2013) as it provides the students an opportunity to explore the activity in greater detail, considering what went well, or what could be improved. It is in effect an opportunity for students to reflect on the experience with the support of the facilitator and is described by Rall et al (2000) as the heart and soul of the simulation experience. Within the debrief the facilitator will lead the students through the scenario considering not only the actual performance but also how it links to past and future clinical practice, providing opportunities to share, and make links to best practice, thus potentially enhancing reasoning and judgement skills (Mariani et al, 2013). As such, Fisher and King (2013) suggest that learning

can only become truly meaningful when all elements affecting the mastery of that skill including values, past experience and motivation are considered.

While the benefits of SBE are well documented, it is a resource-intensive approach requiring significant investments in time, finances, staff, and equipment (ASPiH, 2023), for example, high-tech simulators entail substantial costs related to physical space, maintenance, staff training, and faculty time (Cole et al, 2023). Additionally, despite strong evidence supporting its educational value (Valler-Jones, 2014), students have expressed concerns that the perceived inauthenticity of simulation can negatively impact their engagement and learning (McCaughey et al, 2010). Moreover, SBE often elicits a spectrum of emotional responses, including interest, surprise, and anxiety (Madsgaard et al, 2022), which may enhance the performance of some students while hindering others (Al-Ghareeb et al, 2017).

However, SBE not only offers students valuable learning opportunities to supplement clinical practice but has also been recognised as an acceptable replacement for traditional clinical placements (Williams, 2022; Partner, 2022). The NHS currently faces significant financial pressures (Darzi, 2024), widespread understaffing that adversely affects patient care (Care Quality Commission, 2023), and low staff morale (RCN, 2024a). Consequently, it is incumbent upon Higher Education Institutions (HEIs) to develop alternative avenues for students' professional development. Given that professional socialisation is deeply influenced by immersive clinical learning experiences (Mafumo, 2022), simulation can serve as an authentic clinical environment where students can cultivate their professional values and identity.

However, to further support professional socialisation through simulation-based education, students require role models that mirror their clinical mentors. Near peer learning, where senior students guide and support their junior counterparts, is proposed as an effective strategy to facilitate this process. The following section will review the research evidence underpinning peer learning as a beneficial intervention for student professional growth.

2.5 Near Peer Learning

To further support students' transition from theory to practice and simultaneously manage the challenge of large cohorts of students, peer-to-peer learning has been recognised as a successful pedagogical approach (Curtis et al, 2016); with Lim et al (2022) suggesting peer mentoring programs are important to the development of both mentor and mentee. Peer learning is defined as "the acquisition of knowledge and skills through active helping and supporting among status equals or matched companions" (Topping, 2005 p. 631), while Yarborough and Phillips (2022), define it as a formal partnership between two students with differing levels of experience, especially helpful when pairing first with third year students (Markowski et al, 2021). There are several variations in terms such as peer coaching (Curran, 2024), peer assisted learning (Bennett et al, 2015) or near peer teaching (George et al, 2020), however for the purposes of this study, near peer learning or teaching will be the focus, however terms such as peer learning, peer teaching, and near peer learning will be used interchangeably. It is also important to note that near peer learning differs from a peer mentorship programme, which is defined within the context of this study as a senior student providing a programme of ongoing support for a junior student (Vandal et al, 2018).

The near-peer learning model involves senior students teaching junior students from the same education program and is reported as an effective pedagogical approach to student learning and performance (Irvine et al, 2018), widely used to support the acquisition of clinical skills (Carey, 2018) and whilst on clinical placements (Cuesta-Martinez et al, 2024). Wider potential advantages of peer teaching include reducing student anxiety (Pehivan Costu and Bigoc, 2023), increasing self-esteem (Krisi and Nagar, 2023), increasing student confidence (Yarborough, and Phillips 2022), and competence (Joung et al, 2020), as well as providing a cost-effective method of facilitating learning (Brannagan et al, 2013). Furthermore, experienced students can support their junior peers to bridge the theory-practice gap more effectively, boosting confidence and competence (Lillekroken et al, 2024), as such peer learning has a positive effect on both the student 'teacher' and the student 'learner' therefore

suggesting bilateral improvement in student performance (Williams and Reddy, 2016).

McKenna and Williams (2017) explore the hidden curriculum within near-peer learning, revealing how junior nursing and paramedicine students gain valuable, informal learning from senior peers beyond formal instruction. Through focus groups, the study identifies key themes such as increased awareness of academic expectations, preparation for clinical placements, and strategies for managing difficult situations. Moreover, McKenna and Willaims (2017) report the social and cognitive congruence between peers fostered a supportive learning environment where students feel more comfortable asking questions and reflecting openly.

The philosophical roots of peer learning can be identified in social learning theory and social constructivism (Markowski et al, 2021) which is built on two premises (Andersen and Watkins, 2018), where students build on what they already know. The second premise is that learning is social in nature (Anderson and Watkins, 2018) and can be defined as learning that occurs in a setting where students learn through a shared culture of knowledge (Lockspeiser et al, 2008). As such near-peer learning encompasses key elements of Social Learning Theory (Bandura, 1977) and Social Interaction Theory, highlighting the reciprocal nature of learning that occurs through observation, imitation, and social engagement. Bandura (1977) emphasises that individuals learn by observing others within a social context, where modelling, reinforcement, and cognitive processes interact. In near-peer settings, students learn not only by receiving guidance but also through active participation and mutual influence, illustrating how learning is both social and bidirectional.

Vygotsky (1978) proposed learners' own experiences are influenced by those around them through words, interactions, and collaborations, extending their own learning and as such become immersed within this culture and become part of a continually socially formed learning environment (Williams and Reddy, 2016). As such Vygotsky's (1978) Zone of Proximal Development (ZPD), refers to the gap between what a learner can do independently and what they can achieve with guidance from someone more knowledgeable. In peer learning, particularly near-peer scenarios, senior students act as the "more capable other," (Vygotsky, 1978) supporting junior

peers as they navigate new or complex tasks, thus allowing junior learners to operate within their ZPD, gradually building competence and confidence until they can perform independently. As senior peers are closer in experience and language, they often provide explanations and support in ways that are more accessible and relatable, enhancing both learning and socialisation. As such, the social proximity or cognitive congruence of students to the experiences of their peers may assist their understanding of their difficulties (Bennett et al, 2015), allowing them to relate better to each other, enhancing learning through a shared language (Christiansen and Bell, 2010). For the student mentor, peer learning may engender nurturing which can lay the foundation for future registered nurses becoming collegial and supportive of each other (Henderson et al, 2020), while a meta synthesis undertaken by Jacobson et al, (2022) found that peer mentoring aids the development of students to becoming a professional nurse. Furthermore, peer mentorship challenges the senior partner to respond to the learners needs and encourages reflection on their role as an active listener and problem solver (Cuesta-Martinez et al, 2024), potentially improving leadership and teaching skills (Rosenau et al, 2015).

For the mentee or junior student, near-peer learning supports the identification of role models who embody professional values essential to their professional growth (Li and Li, 2024). It also encourages the adoption of learned behaviours that form part of the hidden curriculum, significantly shaping students' professional identity (Kelly, 2020). Moreover, peer learning enables junior students to develop critical attributes such as judgment and critical thinking skills, which are fundamental to nursing practice (Rush et al, 2012), while simultaneously fostering personal development through the provision of emotional support (Nelwati and Chan, 2018). Moreover, research highlights additional benefits for junior peers, who find it easier to relate to senior students and often perceive them as more approachable and authoritative than lecturers, particularly regarding themes such as future clinical placements, programme expectations, and managing challenging situations, which further contributes to their professional socialisation (McKenna and Williams, 2018).

When considering the impact of peer learning in clinical practice, Aslan et al (2021) report that nursing students who worked with their peers experienced less clinical stress compared to those working solely with their mentors, as well as feeling more

supported and less isolated (Sherman et al, 2023). Moreover, peer support continues to be valuable during graduates' first year as qualified nurses, fostering a sense of belonging (Jeanmougin et al, 2024), and is seen as a coping strategy for challenges and stress, which helps build resilience (Lopez et al, 2018). Teamwork is also highlighted by Ruth-Sahd (2011), who suggests that collaborative learning improves the transition into practice and enhances professional socialisation. As such, peer learning may positively influence the personal, academic, social, and professional aspects of students' lives, encouraging them to persist and succeed in their programmes (Miller et al, 2019).

However, several challenges must be considered by HEIs when supporting peer learning, with Wong and Shorey (2022) suggesting that peer feedback may sometimes cause peers to feel inadequate. Additionally, junior students may experience feelings of intimidation, while senior students might feel anxious about their role in supporting juniors (Boothby et al, 2019). Research has also highlighted issues such as undesirable peer mentor attitudes, unprofessional conduct, and communication difficulties (Ntho et al, 2020), while other challenges include mismatches between learners and the inability of some peer mentors to manage difficult learner behaviours (Irvine et al, 2018), emphasising the need for adequate training and ongoing support for peer mentors (Tornwall, 2018). Moreover, careful logistical planning is essential to accommodate the timetables of students' theoretical and clinical rotations to ensure the effective implementation of peer learning (Gray, 2019).

Students' stress levels are often heightened at the start of their programmes and prior to their first clinical placements (Kachaturoff et al, 2020). Ravenipour (2015) suggests that senior students are well-positioned to support their junior peers, as they better understand the challenges and barriers encountered in the clinical environment and can tailor their peer teaching approaches accordingly. Beyond clinical settings, peer learning within simulation environments is also supported in the literature, exemplified by George (2020) who implemented a peer simulation experience involving both senior and junior nursing students, reporting benefits for both groups, particularly senior students who valued the opportunity to review and reflect on their own performance. Furthermore, peer coaching during simulation

offers a safe space for students to enhance teamwork and collaboration, foster mutual respect, and engage in shared decision-making (Badowski, 2019), and as an approach to learning is argued to be more effective than clinical practice due to the complexities present in real clinical environments (Choi et al, 2021). Additionally, peer-led simulation has been shown to improve student satisfaction and confidence compared to faculty-led sessions (Dennis et al, 2020), while also reducing stress levels and accelerating the development of psychomotor skills (Aslan and Erci, 2021). Consequently, peer learning is proposed to contribute significantly to both professional and personal development, supporting the creation of learning environments that nurture professional growth (Yang et al, 2022).

2.6 Literature Review Conclusion

The role of the student's mentor is central to the socialisation of nursing students, as mentors act as role models who support the development of professional values and the formation of professional identity. However, mentors face numerous challenges in clinical practice, including managing the demands of a busy clinical environment (Mafumo et al, 2022), heavy workloads (Tuomikoski et al, 2020), and the complexities of supporting students effectively (Salisu et al, 2019).

This review has explored the strengths and limitations of simulation and peer learning as educational interventions within higher education institutions, highlighting their potential to foster both personal and professional growth among students. Peer interaction plays a significant role in the learning process (Arkan et al, 2018), while simulation-based education offers a supportive and immersive environment that positively influences student learning outcomes (Cant et al, 2017) and ultimately enhances patient care (Leal-Costa, 2024).

Both simulation and peer learning are grounded in the constructivist learning theory, which encourages learners to actively construct knowledge through discovery and collaboration within social contexts (Clark, 2018). Given the positive impact of collaborative learning on student development (Zhang and Cui, 2018), it is proposed that such approaches be integrated early in nursing programmes to facilitate the socialisation process (George et al, 2020). Consequently, peer learning within

simulation environments emerges as an effective educational strategy to support the professional and social development of both junior and senior nursing students.

2.7 Aim and Research Questions

The primary aim of the research was to investigate the effect of near peer learning through simulation-based activities on the development of adult nursing students‘ professional socialisation. Three research questions were identified to meet the aim of the study:

- How do simulation-based activities contribute to the professional socialisation of nursing students?

- What is the contribution of the senior students to the professional socialisation of the junior students in such simulation-based activities?

- What are the benefits and drawbacks for senior students when supporting junior students in simulation-based activities?

Chapter 3: Methodology

3.1 Introduction

This chapter outlines the methodological approaches employed in this study, beginning with an exploration of the case study methodology used to examine the particularity and uniqueness of the peer-led simulation, through a constructivist lens (Simons, 2009). The chapter then integrates the research methods into five distinct stages, incorporating data triangulation through the use of questionnaires, debriefs, and interviews, thereby enhancing the study's validity. Additionally, the process of data analysis using thematic analysis is discussed, alongside key ethical considerations, including reflexivity and data protection.

3.2 Methodological Considerations

This thesis is theoretically positioned within the paradigms of social constructivism and pragmatism. Pragmatism, as a research paradigm, is associated with action, intervention, and the generation of constructive knowledge, and can be summarised as meaningful, action-based learning formed through social interaction (Goldkuhl, 2017). In essence, Talisse and Aikin (2008) propose pragmatists are driven by a desire to get things done. Originating in the late 1800s through the work of William James, Charles Peirce and John Dewey, pragmatism is a philosophy that views reality as practical, and truth as something determined through the consequences of actions (Huber, 1986), offering an experience-based, action-oriented framework for inquiry (Hothersall, 2019).

As a paradigm, pragmatism supports the use of diverse methods to investigate real-world problems and values multiple sources of evidence to answer research questions (Allemang et al, 2022). Denzin (2012, p. 82) describes pragmatism as a 'doctrine of meaning and theory of truth', where meaning is derived from events experienced in social interaction, as such pragmatists assess the value of knowledge based on its practical usefulness (Long et al, 2018), highlighting the importance of

real-world impact. In addition, pragmatism emphasises the consequences of social reality (Kelly and Cordeiro, 2020), which is particularly relevant to this study as it explores the impact of peer learning on professional socialisation.

In parallel, social constructivism also underpins this research. This paradigm posits that knowledge is constructed through experience and interaction with one's environment. Social constructivism forms a key theoretical basis for simulation-based learning (Hallmark and Johnson, 2024), with core principles asserting that learning is built upon prior knowledge, is active, contextualised, and socially situated (Dzikowicz and Carey, 2022). Additionally, social constructivism also holds that social interaction, rather than innate intellect, is a primary source of knowledge (Abualhaija, 2019). Within this view, knowledge and reality emerge through interpersonal engagement, allowing students to build on prior understanding, for example, by working through simulation-based scenarios. Additionally, it is proposed that individuals construct their own meaning through experience, shaped by personal perspectives and interpreted into broader patterns or themes (Monteiro and Sibbald, 2020), which ultimately leads to expanded understandings (Creswell and Plano Clark, 2018).

To explore students' perspectives, this study adopts a range of data collection methods across multiple research stages. These methods are selected for their suitability to address the research questions, in line with the pragmatic paradigm's emphasis on methodological flexibility and practical relevance (Allemang et al, 2022).

3.3 Research Design

Methodology provides the philosophical foundation that underpins investigative frameworks (Abawi, 2012); therefore, the selection of an appropriate methodology is crucial, as it guides the overall research process. The most effective research design is the one that best addresses the research questions posed (Siedlecki, 2020), however historically, within health and medical fields, research has been dominated by the pursuit of universal truths through hypothesis testing (Eva, 2009), often

regarded as the domain of an academic elite (Gerrish and Lacey, 2010). This scientific approach, rooted in positivist enquiry, has long shaped healthcare research and is characterised by systematic procedures and clearly defined rules (Fain, 2009; Polgar and Thomas, 2008).

However, interpretivist methodologies have increasingly emerged as suitable approaches for exploring complex and context-dependent issues in healthcare, particularly in nursing (Anthony and Jack, 2009). The legitimacy of qualitative methods in health research has since gained wider recognition (Green and Thorogood, 2018); while quantitative research focuses on measuring variables using numerical data, patterns, and quantities (Maltby, 2015), qualitative research is concerned with understanding human experiences, events, and cultures over time (Grove et al, 2013, p. 23).

Qualitative research is often associated with terms such as immersion, in-depth exploration, and rich description, and is driven by the aim to uncover new knowledge, insights, and relationships (Fain, 2009; Maltby et al, 2015). Given that this study seeks to explore meaning and gain deeper understanding, qualitative research methods were deemed most appropriate. In considering traditional interpretivist approaches, several were explored, including ethnography, phenomenology, and grounded theory, before case study methodology was selected as the most suitable for this inquiry.

Case study research is a well-established methodology in nursing and health research for exploring complex phenomena within health and social care settings (Anthony and Jack, 2009). However, it has been argued that there is a lack of consensus regarding its philosophical foundations and methodological approaches (Harrison et al, 2017). Qualitative case study research is defined as an inquiry bound by time and place that produces thick descriptions and close interpretations to generate explanations (Cleland et al, 2021), which suggests that the methodology allows for a focused and in-depth examination of particular issues.

The primary purpose of the case study method is to conduct a comprehensive, integrated, and in-depth exploration of a complex issue, event, situation, programme,

person, or group (Korniichuk et al, 2021), as such within this framework, the case itself becomes the central object of interest (Bryman, 2021). Moreover, a defining feature of case study research is that it must be situated within a real-life or authentic context, particularly when the boundaries between the phenomenon and its context are blurred (Yin, 2018). This characteristic makes case study research especially useful for exploring how or why events occur as they do (Siedlecki, 2020), and for examining complex phenomena within natural settings (Paparini et al, 2020). While researchers may employ either qualitative or quantitative approaches within case studies, these choices do not define the methodology itself. Instead, case studies are primarily characterised by their focus on the singularity of the phenomenon under investigation, rather than a specific methodological alignment (Gerring, 2007), which supports the notion that case study research is methodologically flexible and contextually grounded.

Furthermore, case study research involves conducting in-depth investigations into the actors within systems to generate evidence on how these individuals interpret relationships between interventions and outcomes (Green et al, 2022). According to conventional understandings, a case study typically encompasses two core areas of focus (Yin, 2018). Firstly, the case study investigates a contemporary phenomenon in depth within its real-life context, particularly where the boundaries between the intervention and the outcome are not clearly defined. In the context of this study, the phenomenon is professional socialisation, and the simulation environment represents the real-life context, and boundaries are blurred, as students' experiences are shaped by controlled scenarios that still allow for authentic collaboration within a realistic setting.

Secondly, Yin (2018) notes that a case study addresses distinctive situations by relying on multiple sources of evidence, which are brought together through triangulation, a process discussed in greater detail later in this chapter. While Yin (2018) emphasises the structural characteristics of case study methodology, Merriam (2009) highlights the importance of the 'bounded system' under investigation, arguing that its in-depth description and analysis are central features of the case study approach.

Case studies may be understood as idiographic in nature, where a single case or "picture" is explored in great depth rather than through comparison with multiple, less detailed cases (Thomas, 2021). This idiographic typology aims to describe, explain, or interpret a specific case (Levy, 2008), nonetheless, methodological consensus regarding the design and implementation of case study research remains elusive (Yazan, 2015). A key consideration when selecting a case study design is the interpretive lens applied by the researcher (Thomas, 2021), as methods will vary depending on whether the researcher's interest is intrinsic, focused on the case itself, or instrumental, using the case to understand a broader issue (Simons, 2009). Consequently, positioning myself within this research context required ensuring that the selected approach aligned with the nature of the research questions. It was essential that the methodology enabled a focused exploration in which the phenomenon under investigation; professional socialisation remained central to the inquiry. As such when considering the critical features of this case study research, three key theorists were examined: Yin (2018), Merriam (2009), and Stake (1995). Although their epistemological stances differ, there is considerable overlap in their approaches, which highlights the methodological flexibility inherent in case study research. Yin (2018), adopting a post-positivist stance, asserts that the boundaries between the phenomenon and its context are often unclear, and that researchers may have limited control over the events being studied. In contrast, Stake (1995) adopts an interpretivist approach, outlining three distinct types of case studies, intrinsic, instrumental, and collective, emphasising the importance of the researcher's interpretive role in understanding the case.

The approach adopted for this study, however, aligns most closely with that of Merriam (2009), who takes a pragmatic constructivist stance (Harrison et al, 2017). Merriam's constructivist perspective assumes that reality is constructed inter-subjectively through socially and experientially developed meanings and understandings. The philosophical aim, therefore, is to uncover the meanings constructed by key participants (Yazan, 2015). Merriam (2009) also advocates a pragmatic orientation, suggesting that case study research can incorporate both qualitative and quantitative data, provided the goal is to support inductive reasoning and interpretation. This pragmatic stance reinforces the notion that case study is not a method in itself, but rather a focus of inquiry that is examined in depth (Thomas,

2021). As such, the case study serves as a vehicle to explore multiple perspectives, compare differing viewpoints, and uncover how and why certain phenomena occur (Simons, 2009). This demonstrates the flexibility of the approach, which is not constrained by strict methodological, temporal, or procedural boundaries.

The case study is widely recognised as an effective approach for exploring educational innovations within specific contexts and has historically been used to enhance educational programmes (Simons, 2009), as such, it was deemed well-suited to the aims and domains of this study. Additionally, case study methodology enables the exploration of complex real-world interventions that may not be suitable for experimental research designs (Yin, 2018), thereby emphasising practical impact within authentic settings.

From a practical standpoint, Simons (2009) notes that case studies typically draw on multiple sources of evidence to guide data collection, including observations, interviews, and documentary analysis. This aligns closely with Merriam's (2009) pragmatic approach, which supports methodological flexibility and responsiveness to the research context. The use of multiple data sources is considered a key strength of case study research (Yin, 2018), as it facilitates triangulation and strengthens the validity of findings. Accordingly, this study employed questionnaires, debriefs, and interviews as data collection tools to support triangulation and enable content analysis, as further supported by Merriam (2009).

3.3.1 Methodological Triangulation

Data source triangulation involves the comparison of data collected from separate phases of fieldwork, which has the potential to increase the confidence in the conclusions made (Gerrish and Lacey, 2010). Merriam (2009) advocates this as an approach to ensure the quality of the study, hence I needed to not only 'drill down' to maximise the evidence collected but also to create a multi-dimensional picture by looking at the case from multiple angles (Thomas, 2021). Triangulation can be utilised to obtain different complementary data on the same subject area in mixed methodological approaches to further enhance understanding of the research topic

(Bowling, 2014). However, it is also proposed that one method of data collection can be used to validate findings from another (Green and Thorogood, 2018), therefore by using these multiple approaches it may be expected to enhance the depth of data.

Triangulation is not a tool or strategy to elicit validation, instead it is an alternative to validation (Flick, 2018), and is a key strength of case study research as it maximises the opportunity to use multiple sources of evidence to provide in depth explorations of a phenomena (Houghton et al, 2017), providing each source of evidence has a clear purpose. Additionally, triangulation employs multiple methods, often at various levels of analysis (Gerring, 2007) however, Thomas (2021) goes further and suggests one must drill deep, using different methods, and drilling from different directions, thus improving the quality of the study (Merriam 2009).

3.4 Research Methods

The research design for this study is structured across five distinct stages, as illustrated in Figure 3 below. Stage one involved the co-design of simulation scenarios through collaborative efforts between students and academic staff, ensuring relevance and authenticity, while stage two focused on the facilitation of the simulation itself. The remaining three stages comprise the data collection process: a post-simulation questionnaire, a structured debrief session, and follow-up interviews. This multi-stage approach was developed to ensure methodological rigour, promote participant engagement, and enable data triangulation across varied points of reflection

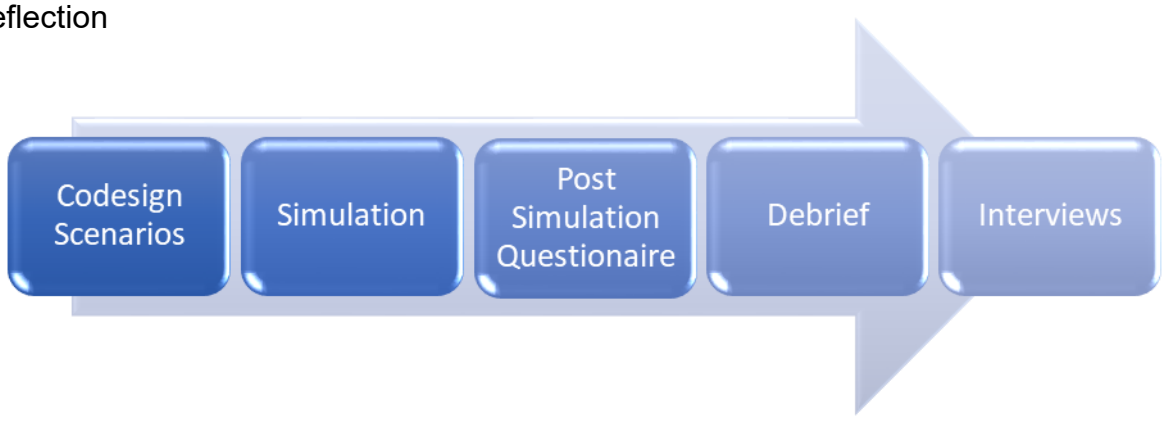


Figure 3: Research Stages

3.5 Stage 1: Co-designed Scenarios

Over the past decade, there has been growing emphasis on co-production within education (Carey, 2016), with students increasingly engaged as partners in shaping and leading their educational experiences (Kay et al, 2010; Alconero-Camarero et al, 2016). Higher education provides a valuable platform for collaboration between students and faculty (Salje, 2024), placing a responsibility on educational institutions to ensure that learning experiences are meaningfully co-created by students and other relevant stakeholders (Athakkakath et al, 2015). As such, beyond contributing fresh perspectives and unique insights, student involvement in co-production has been linked to enhanced retention, improved academic performance, and a more enriched educational experience overall (Carey, 2016).

In co-production, students and lecturers are viewed as collaborators engaged in a shared enterprise that supports a collective approach to learning (McCulloch, 2009). While lecturers bring subject expertise and knowledge of learning outcomes and pedagogical design, students contribute their lived experience of the programme (Salje, 2023) and recent insights into the realities of professional practice. Additionally, co-production offers various benefits for students, including enhanced transition, engagement (Vinson et al, 2010), and retention (Thomas, 2012). Furthermore, for universities, student engagement can inform curriculum refinement (Bovill et al, 2011) and is considered a fundamental element for the approval of nursing education programmes (NMC, 2024a). However, partnership working is not without challenges, with potential barriers including power imbalances, potential institutional agendas (Matthews et al, 2018), differing levels of skills and knowledge among partners, and student reluctance to fully participate in the co-design process (Smith et al, 2024).

When designing simulation scenarios, the Association for Simulated Practice in Healthcare (ASPiH, 2023) recommends that individuals involved should be adequately trained and committed to continuous professional development. Accordingly, three Adult Nursing lecturers with experience in simulation and scenario design were invited to a co-design scenario workshop, alongside two Simulation

Technicians who brought expertise in simulation technology and ensured the availability of necessary equipment and logistics for facilitating the scenarios. To incorporate student perspectives, senior students in their final year were also invited to join the workshop; the participants recruitment process is detailed later in this chapter. As the purpose of the workshop was develop the scenarios through collaborative discussion, it was underpinned by focus group methodology. Bowling (2014) describe focus groups as

> *"a group of people, brought together, to discuss, or focus on, a specific research issue, or issues, to enhance understanding, using open-ended questions."*
>
> (Bowling, 2014, pp 410)

Focus groups involve asking participants about their opinions and ideas, with the level of interaction between participants being crucial to the quality of data collected (Maltby et al, 2015), significantly influenced by the role of the group facilitator (Cronon, 2015). Furthermore, both interviews and focus groups require careful planning and preparation (Polit and Beck, 2017); however, it is equally important that the facilitator allows participants sufficient time to explore their own understanding and challenge one another, thereby ensuring that students' opinions remain independent and uninfluenced. Focus groups are particularly useful for exploring and confirming ideas, as group interaction enhances depth and richness of data (Gerrish and Lacey, 2010).

Prior to the workshop, students, simulation technicians, and lecturers were provided with an overview of the theoretical and practical content that junior students had completed before the simulation (see Appendix 2). This was to ensure that the scenarios were appropriate to the students' level of knowledge and experience, as recommended by the Association for Simulated Practice in Healthcare (ASPiH, 2023). Alongside the aims and objectives of the research, participants also received a scenario template based on the guiding principles of scenario development also outlined by ASPiH (2023) (Appendix 3).

In addition to scenario creation, the workshop aimed to develop clear learning outcomes, which are considered best practice in simulation (ASPiH, 2023). Monterio and Sibbald (2020) emphasise that learning outcomes need to be clear and transparent to effectively focus the simulation on its intended educational goals. To reinforce this, at the start of the workshop, the use of SMART objectives and guiding principles was reviewed through a brief PowerPoint presentation (Appendix 4).

Due to ongoing COVID-19 restrictions, including social distancing measures, the workshop was conducted virtually using the online platform Zoom, however Tiersma et al (2022) highlight that virtual workshops introduce additional challenges that researchers must consider. One key advantage of conducting the workshop online was the ability to continue the research while adapting data collection methods to ensure participant safety (Smith et al, 2022). Although online data collection carries risks related to technology access and potential technical failures (Smith et al, 2022), both staff and students were familiar with using virtual platforms, as all teaching and meetings were conducted online at the time. Key to the success of the workshop, however, was participant interaction and I was mindful that students might feel reluctant to contribute and that academic staff could potentially dominate the discussion.

To mitigate these risks, I began the workshop with a brief PowerPoint presentation reiterating confidentiality, the purpose of the session, guiding principles, and emphasising the importance of equal participation. Drawing on my experience in chairing meetings, I actively facilitated the discussion to keep it on topic and ensured all participants had the opportunity to express their views, maintaining my role as researcher and facilitator rather than contributor. Although I considered asking participants to virtually raise their hands to contribute, I judged that this would restrict natural interaction and was confident in my ability to manage equitable participation effectively.

In total five senior students, three lecturers and two simulation technicians attended, and consent was obtained to record the workshop. To further aid the development of the scenarios, an online whiteboard template was used where I inputted participants' ideas and thoughts in real time. The whiteboard template also included a section for

two learning outcomes, critical actions and detail regarding the end point the students were deemed to be able to reach which signalled the completion of the simulation. Based on time constraints and the location where the simulation would be undertaken, it was decided that four scenarios would be sufficient as this allowed for two simulations together with debriefs to be undertaken in a day. During the workshop there was participation by all members, however there were several times where I pursued further engagement with students to elicit their views and draw on their experiences from practice to ensure equitable input. Although the scenarios were developed using the whiteboard, I additionally viewed the recording of the workshop several times to ensure I had not missed any key details. The scenarios were then transferred to the simulation templates and to promote quality assurance and rigour, were emailed to all participants for comment.

During discussion and comments, it was agreed the scenarios would focus on different areas of practice, representing realistic scenarios a junior student may face in practice. An overview of the scenarios are outlined in table one below, the full scenarios are in Appendix 5.

Table 1: Simulation Scenarios

	Overview	Diagnosis	Learning Outcomes
Scenario 1	Patient admitted following collapse, drug overdose, wants to take own discharge	? Drug Overdose ? Epilepsy	- Self-discharge procedure - Effective communication
Scenario 2	Patient has been admitted for investigations following chest discomfort and a history of hypertension. Patient is being prepared for an angiogram which has been cancelled	? Angina	- Completion of pre-operative documentation - Patient's complaints policy - Pre-operative care
Scenario 3	Patient has been admitted following general deterioration of health.	? Metastasis following ovarian cancer	- Effective sub continuous injection technique

	Patient is receiving end of life care and has a syringe driver in situe. Patient's oral intake is extremely poor and is currently being nursed in bed	? Dehydration	- Effective holistic assessment
Scenario 4	Patient has been admitted following an increase of confusion over the past couple of months. Admitted following a fall at home, no major injury. States she has been feeling forgetful. Lives alone in a bungalow close to family	Confusion? cause ? Urinary Tract Infection	- Prioritising care for unwell patient - Recording vital signs

3.6 Stage 2: Facilitation of Simulation

3.6.1 Access and Sampling

The participants for the study were students undertaking an Adult Bachelor of Nursing programme at Cardiff University, actively engaged in the programme and were not on an interruption of study. As a key focus of the research is on peer learning, students were recruited from both first and third years of their studies hence for the purpose of this research and to ensure consistency first year students will be referred as junior students and third year students as senior students.

Each year, as part of their nursing programme, students will undertake four modules which includes a portfolio module which is mostly taught and assessed in practice. At the beginning of the programme first year/junior students attend a 12-week theory block, where they are introduced to the nursing profession and provided with the core knowledge and skills, before they attend their first placement in a clinical

setting. In the third-year, students undertake a dissertation focusing on a service improvement and attend two placement-learning opportunities. Their final management placement serves as a mode of transition from student to qualified nurse where students consolidate their learning and undertake specific management learning outcomes. As such the simulation was organised for the first-year students third week of their first placement, while the third-year students were midway through their final learning experience in practice.

3.6.2 Sampling strategy

Sampling is a complex and technical topic, with entire texts devoted to its study (Polit and Hungler, 2013), however Bryman (2021) categorises sampling strategies broadly into two types: probability and non-probability sampling. Probability sampling involves random selection of participants, where members of the population, in this case, student nurses, are numbered and chosen randomly (Bowling, 2014). However, as probability sampling is predominantly used to explore cause-and-effect relationships (Rees, 2011) it is generally not appropriate for case study research.

Non-probability sampling encompasses several techniques, including convenience, purposive, and snowball sampling. Purposive sampling, also known as judgement sampling, involves selecting participants who possess specific experiences or characteristics relevant to the research focus (Moule and Goodman, 2014). In this case study, purposive sampling enabled the researcher to identify and recruit a clearly defined group of participants, aligning with Silverman's (2010) recommendation to intentionally select a population that can best inform the study aims. However, this approach requires careful consideration of the criteria used to define the target population to ensure the sample is both appropriate and credible.

While a case study often implies a focus on a single case or observation, Gerring (2007) argues that case studies usually involve multiple observations, especially in cross-sectional analyses of several cases. Moreover, a single case study may include subunits or 'informants' who are essential for investigating the phenomenon (Gerrish and Lacey, 2010). In this study, these informants are student nurses, who

must be identified to explore the phenomenon effectively. Although random selection from a wider population is sometimes possible (Simons, 2009), case study research typically requires participants with specific knowledge and understanding to gain meaningful insights. Therefore, purposive sampling was employed in this study.

3.6.3 Recruitment

The effective recruitment of participants is crucial to the success of a study, as such researchers may employ three main strategies; opportunism, systematically inviting people and using commercial marketing companies (Green and Thorogood, 2018). There are however many negative and positive factors when considering recruitment such as attitude and ethics of the researcher, participant interest and informed consent (Grove et al, 2013). Additionally, as I am employed at the university where the student participants are based, this may be considered an advantageous position in terms of access; however, it also raised important ethical considerations. In particular, issues related to familiarity and coercion and the potential negative implications of existing relationships, which required careful reflection, and will be discussed later in the chapter.

As students from the first and third years of the BN Adult Nursing programme needed to be invited to participate in the research, this required a consistent and systematic approach for the two cohorts of students, with the initial communication with potential participants important as it has a significant effect on their decision regarding participation (Grove et al, 2013). As such, a lecture was identified during the first-year student's theory block where I proposed participation in the research study in a 15-minute time slot at the end of the lecture. A different PowerPoint presentation was used for the junior and senior students (Appendix 6 & 7) introducing the students to the project and its objectives, providing an overview of key themes such as professional socialisation, peer learning and simulation. In addition, students were informed what their participation would entail, benefits of participation in terms of developing knowledge and experience, and data collection procedures. However, during the presentations, it was made clear that participation

in the research was voluntary and would not affect their progress or future academic assessments.

A follow up announcement was also placed on the students learning central (online student platform) and students were invited to email within two weeks of the announcement to express their interest. It is noted that when placing announcements on learning central there is a function that supports the announcement to be emailed to the students' personal University email accounts, as such students also received an email. Following an expression of interest, a participant information sheet (Appendix 8 & 9) was emailed to them together with a consent form (Appendix 10). Students were then invited to send the consent form using an electronic signature back to my university email account.

To recruit third year students who were in their final year of studies to the simulation codesign and scenario participation the same approach to recruiting first year students was undertaken. At the time of the simulation, they were in the 7th week of their final placement of the programme; hence, they were nearing the end of their studies and were due to qualify as an adult nurse in the near future. To recruit Lecturers and Simulation Technicians to the simulation co-design and scenario participation an email was sent to those who were members of the Adult Nurse Simulation Group (Appendix 11) along with a participation information sheet and consent form (Appendix 12 & 13). These members of staff not only have an interest in simulation but also have experience in designing scenarios in the adult nursing programme.

3.6.4 Participants

The proposed sample size for the simulation aimed for a total of Senior Students (n=16) and Junior Students (n=16) undertaking the simulation with Senior Students (n=8) undertaking the patient's role during the scenarios. However, the total number of students who participated in the simulation was (n=31); (n=13) junior and (n=18) senior students. The proposed sample size was determined pragmatically and

pedagogically, rather than through the notion that ‘bigger is better’, which is not appropriate for qualitative case study research (Thomas 2021, pg. 67). As such, the sample size was primarily informed by the capacity of the simulation environment, the structure of the simulation scenarios and the availability of the simulation suite.

Each simulation session was designed to replicate an authentic clinical environment using two four-bedded bays, requiring a specific number of participants to ensure realism while allowing all students to actively engage in either care delivery or simulated patient roles. Eight junior students were required to rotate through the scenarios across the two bays each day, while eight senior students were required to undertake the roles as peer mentors. This subsequently ensured that each junior student received direct near-peer support and that each scenario could be delivered consistently across groups.

Although the final number of participants was slightly lower than originally planned, this did not compromise the integrity of the study, as data saturation was achieved across the multiple data sources, including questionnaires, debriefs, and follow-up interviews. The final sample therefore remained sufficient to address the research aims and generate credible, meaningful insights.

The ages of the participants from the cohorts ranged between 18 – 45+, and it is noted there is a clear in the spread of participant ages between the junior and senior student groups who participated in the research. Within the senior student group all students recorded themselves as between 18 – 34, however the ages of the junior students had an even spread of ages across all age groups.

As not all third-year students had participated in the development of the scenarios and were therefore unfamiliar with the simulation content, they were sent the completed scenario templates three weeks prior to the simulation. Given that their role was to support the junior students throughout the simulation, it was important that they understood both the learning outcomes and what to expect during each scenario, as such this approach promoted consistency and provided the third-year students with the opportunity to contact me with any questions or concerns. Additionally, it supported the senior students undertaking the patient role by asking

them to prepare appropriately, including dressing to fit their roles, thereby enhancing the realism of the simulation.

3.6.5 Simulation Facilitation

When considering simulation facilitation, The International Nursing Association for Clinical Simulation and Learning (INACSL) Standards Committee et al, (2025a) describe facilitation as the process of guiding participants through the simulated experience. In the context of simulation-based education, this would ordinarily involve the lecturer actively supporting learners throughout the scenario, however, such involvement was not appropriate for the purposes of this research. To minimise researcher influence and enhance the rigour of the study, I did not adopt an active facilitation role during the simulation scenarios. Instead, I remained in the control room for the duration of each simulation, observing proceedings via live camera feeds alongside a simulation technician. My positionality as the researcher is discussed further in Section 3.10.

During the simulations, my role was limited to observation and oversight, however in the event of any safety concerns or if a student became unwell, I would have been able to ask the simulation technician to alert the lecturer facilitating the session. I also monitored the timing of each scenario and informed the technician when simulations were complete so that this could be communicated to the facilitator. At all times, I remained in the control room and did not interact directly with participants during the simulations

Prior to the simulation, a structured pre-brief was undertaken with both junior and senior students. The INACSL Standards Committee et al, (2024) states that the purpose of a pre-brief is to provide learners with essential information, expectations, and assumptions underpinning the simulation-based experience. While the Somerville et al, (2023) highlight that effective pre-briefing promotes psychological safety, it was also important that junior students were adequately familiarised with the clinical scenarios they would encounter.

Accordingly, all junior students were invited to attend the simulation suite 40 minutes prior to commencement. During this time, they were met by the lecturer supporting the research project and provided with a structured handover relating to the four patients they would be caring for during the simulation. Clinical handover refers to the transfer of professional responsibility and accountability for some or all aspects of patient care to another individual or professional group, either temporarily or permanently (Australian Medical Association, 2006). In clinical practice, handover represents a critical point in the nursing shift, during which accurate, structured, and complete information exchange is essential (National Institute for Health and Care Excellence (NICE), 2018). Effective communication during handover is therefore fundamental to safe patient care, further supported by Eggins et al, (2016), who identify poor communication in nursing practice as being associated with clinical errors, delays in diagnosis, and reduced patient satisfaction.

To ensure consistency of information, junior students were provided with a pre-recorded video handover prior to commencing the simulation. The handover outlined the four patients they would be supporting and clearly articulated the learning objectives for the simulation, which had been developed during the co-design phase of the study. The use of a standardised video handover ensured that all student groups received identical information, thereby enhancing consistency across simulations and strengthening the internal validity of the research.

In addition to the handover, students were informed about the overall structure of the simulation and given the opportunity to ask questions. It was also acknowledged that students might require support during the simulation, as such, the lecturer who facilitated the pre-brief and contributed to the scenario development remained present on the ward throughout the simulation. Their role was to remain outside the clinical bays, respond to questions relating to the location of equipment, and intervene only in exceptional circumstances, such as if a student became excessively anxious or unwell.

To support consistency across the simulation sessions, I met with the lecturer on several occasions prior to the simulation to review the structure of the scenarios and address any concerns. Furthermore, the same lecturer conducted all pre-briefs and

supported each simulation session, ensuring a consistent approach throughout the study.

Senior students undertaking the roles of near-peer mentors and standardised patients were also invited to attend the simulation suite 40 minutes prior to commencement. Although these students had received the simulation scenarios in advance as part of their pre-brief, this time was used to review each scenario in detail to ensure clarity and confidence with the content. The pre-brief also provided an opportunity to explicitly discuss the senior students' role as mentors and guides within the simulation.

The simulation was conducted in the Caerleon Suite located at Ty Dewi Sant, Cardiff University. As illustrated in Image 1 below, the Caerleon Suite closely replicates a contemporary hospital ward, incorporating increasingly sophisticated technologies reflective of modern healthcare environments. This provided a realistic and immersive setting in which students could develop clinical skills and practise the delivery of safe and effective patient care. The simulation activities took place within two of the four-bedded bays; however, students also had access to an adjacent treatment room, enabling the preparation of medications and wound dressings where required by the scenarios.

Image 1 Caerleon Suite, Cardiff University

As illustrated in Image 2, the lecturer supporting the simulation remained in the corridor at the nurses' station, located outside the simulation bays. In my role as researcher, I remained in the control room throughout the simulation, observing the activity via SMOTS cameras integrated within the bays

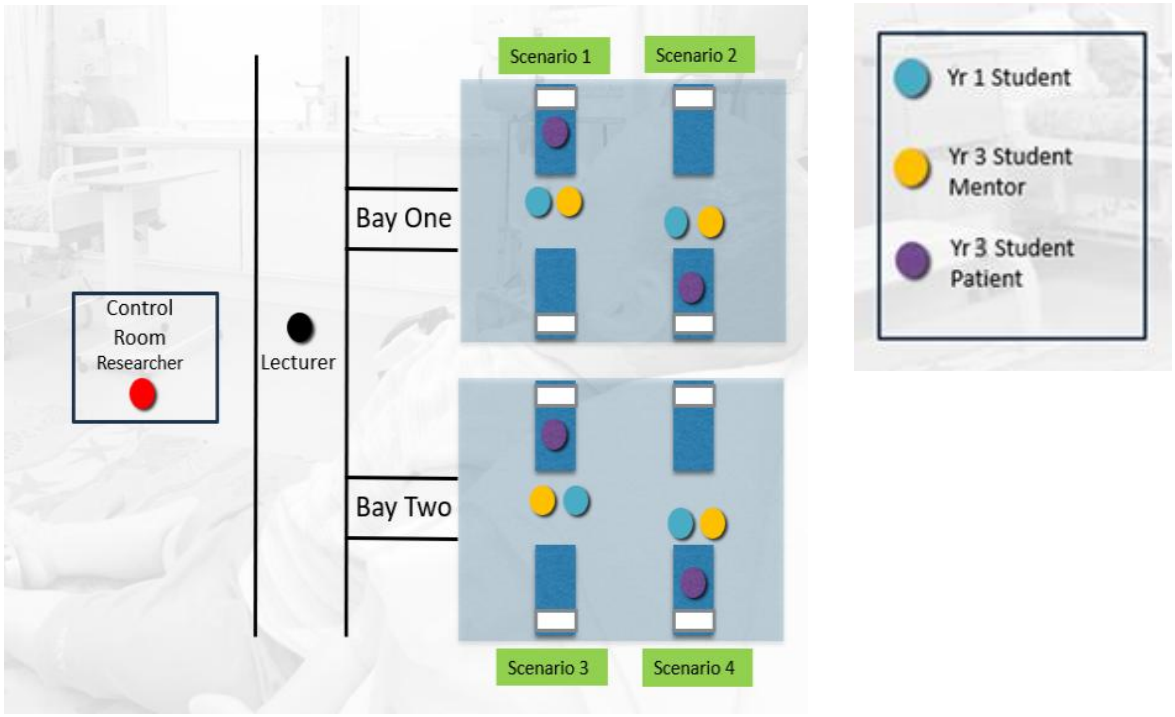


Image 2 Ward Structure

The simulations were delivered over two consecutive days, with each session lasting four hours. Each simulation comprised four scenarios, with 30 minutes allocated per scenario, and two sessions were conducted each day (morning and afternoon). As two identical simulation bays were available, each simulation involved four senior students acting as simulated patients, with pairs of junior and senior students assigned to each bay and rotating through the scenarios, as illustrated in Image 2 above. Following the completion of each scenario, students were provided with a ten-minute break, during which they were invited to gather in the treatment room while the next scenario was prepared. The overall structure and timing of the simulation sessions are presented in the tables below.

Table 2: Simulation Scenarios AM

	Patient 1 Bay 1	**Patient 2 Bay 1**	**Patient 3 Bay 2**	**Patient 4 Bay 2**
09.00 - 09.30	Group 1	Group 2	Group 3	Group 4
09.40 - 10.10	Group 3	Group 4	Group 1	Group 2
10.20 - 10.50	Group 2	Group 1	Group 4	Group 3
11.00 - 11.30	Group 4	Group 3	Group 2	Group 1
11.30 – 11.45	Complete Post Simulation Questionnaire			
11.45 – 13.00	Debrief			

Table 3: Simulation Scenarios PM

	Patient 1 Bay 1	**Patient 2 Bay 1**	**Patient 3 Bay 2**	**Patient 4 Bay 2**
13.30 – 14.00	Group 5	Group 6	Group 7	Group 8
14.10 - 14.40	Group 7	Group 8	Group 5	Group 6
14.50 – 15.20	Group 6	Group 5	Group 8	Group 7
15.30 – 16.00	Group 8	Group 7	Group 6	Group 5
16.00 – 16.15	Complete Post Simulation Questionnaire			
16.15 – 17.30	Debrief			

3.7 Stage 3: Post Simulation Questionnaire

Immediately following the simulation all students were invited to complete a semi-structured questionnaire to evaluate their experience, with an aim of gaining their immediate feedback with a particular focus on working in a simulation-based environment with peers. This was seen as fundamental as it was the initial thoughts of students and would form a basis for future data collection. The questions were therefore developed with a key focus on the simulation and peer learning; however, it was also an opportunity to gain immediate insight into how the students would apply knowledge gained from the day, as this would have an impact on their future practice.

The questionnaire consisted of six open-ended questions including one Likert scale (Appendix 14). Questionnaires are useful data collection tools as they often form the basis of gathering data in healthcare (Moule and Goodman, 2014) allowing the researcher to gather detailed information in a cost-effective way (Rees, 2011). Additionally, questionnaires were familiar to the students and using open-ended questions allowed the gathering of rich data which formed the foundation of the thematic analysis. The questionnaires were anonymous; however, students were asked to confirm which group they were in and to confirm their ages for future consideration.

3.8 Stage 4: Debrief

As the aim of the research is to explore the development of professional socialisation it is appropriate that this is explored immediately following each individual simulation through effective debriefing. Debriefing is described as a lynchpin in the process of learning (Gardner, 2013) and is defined as the process where a student's experience is explored to make sense of what happened (Rall et al, 2000). In addition, debriefing aims to identify and resolve gaps in knowledge, skills, attitudes, and communication related to the individual and team (INACSL Committee et al, 2025b) and as such promotes self-awareness and reflection, providing a space for students to explore

their decision-making processes during the simulation (Verkuyl et al, 2020). In essence it is an opportunity for students to discuss what aspects of the scenario went well, what could have been improved and what they learnt from the educational intervention. Another key aspect of debriefing however, is exploring student's emotions following the simulation, which deepens participants' understanding of decisions made and validates their own fear (Coleen et al, 2021). Debriefing is therefore a key element of a simulation as suggested by Health Education and Improvement Wales (HEIW) (Online, accessed on 13/10/2024), hence it is imperative this was facilitated as part as part of the students learning experience.

Structured debriefing incorporates predefined questions, guidelines, and activities that are planned in advance to support learning (INACSL Standards Committee et al, 2025b), to guide the debriefing process, a structured debriefing model was therefore used. Within nursing education, a wide range of validated debriefing models are available (Coleen et al., 2021), however, in my role as Simulation Lead, I had previously developed a debriefing framework to support all simulation activity, based on the 3D model of debriefing described by Zigmont et al. (2011).

This model (Appendix 15) is underpinned by Kolb's experiential learning cycle (Kolb, 1984) and is structured into five sequential phases: pre-briefing, defusing, discovering, deepening, and summary. These stages reflect established debriefing strategies and are designed to facilitate reflection, knowledge integration, and application to practice (Zigmont et al., 2011). Although alternative debriefing models were available, this framework was embedded within the Cardiff University School of Healthcare Sciences simulation strategy and was developed collaboratively with input from multiple healthcare professions.

At the time of its development, debriefing practices following simulation were inconsistent across healthcare programmes. Consequently, there was a recognised need for a standardised debriefing framework to ensure consistency and quality. The 3D model was developed by the school's simulation strategic group, which included representation from all professional groups, and was circulated to staff for consultation. Following refinement, the framework was formally validated and approved through the School of Healthcare Sciences senior management group.

Immediately following the simulation, debriefs were facilitated by myself in a dedicated debriefing room designed to minimise external distractions and foster a psychologically safe learning environment in which trust, respect, and confidentiality were prioritised (ASPiH, 2023). Establishing psychological safety was considered essential given the emotionally demanding nature of simulation-based learning and the potential vulnerability associated with reflective discussion. To support this, clear ground rules and expectations were reiterated prior to each debrief, ensuring students understood that the purpose of debriefing was learning and reflection rather than performance evaluation.

Each debrief involved between six and ten participants, and all sessions were audio recorded, and with participants' consent, the fixed SMOT video cameras within the room were also utilised. This approach supported data accuracy and enabled clarification of participant contributions where necessary during the analysis phase, thereby enhancing transparency of the research process.

Throughout the debriefing process, I remained acutely aware of my dual role as facilitator and researcher. To minimise researcher influence and enhance methodological rigour, I adhered systematically to each stage of the debriefing model and adopted a facilitative stance, in accordance with the INACSL Standards Committee et al. (2025b). Open-ended questioning was used to prompt reflection on clinical decision-making, communication, teamwork, and professional judgement demonstrated during the scenarios. Students were encouraged to explore not only what actions were taken, but why those decisions were made, how they felt during the experience, and how their actions aligned with professional values and expectations.

Additionally, the debriefs provided a psychologically safe space for emotional processing, enabling students to reflect not only on the simulation but also on their wider experiences in practice. Through collective reflection and peer discussion, students shared broader experiences of being a nursing student, including reflections on their developing professional role and their experiences within clinical placements beyond the simulated environment. These experiences will be considered further in chapter 4.

3.8.1 Data Analysis:

The analysis of data derived from case studies is one of the least developed and most difficult aspect of undertaking case studies (Yin, 2018) and involves reducing, organising and giving meaning to the data (Grove et al, 2013). There are two approaches to data analysis in qualitative research: grounded theory and analytic induction which Bryman (2021) describes as:

> *"approach to analysing data in which the researcher seeks to explain phenomena by collecting data until they no longer find cases that are inconsistent with a hypothetical explanation of a phenomenon."*
>
> *(Bryman 2021, pp 626)*

When considering data analysis in case study research, Yin (2018) suggests that the process involves examining, categorising, tabulating, and testing data to address the initial propositions of the study, which supports the use of thematic analysis. Thematic analysis aims to explore and identify patterns of meaning across a dataset in relation to the research question (Braun and Clarke, 2013), and is a useful approach for identifying typical responses (Green and Thorogood, 2018) enhancing theoretical flexibility by providing a rich and detailed account of the data (Novell et al, 2017).

To guide the thematic analysis, Braun and Clarke's (2013) stages of coding and analysis were followed, including transcription, familiarisation, coding, development of themes, and review of themes prior to analysis. To further support the process, computer-assisted qualitative data analysis software (NVivo 12) was used, which not only expedites the analysis but also assists the researcher in demonstrating a rigorous approach to data analysis (Silverman, 2010).

The first step in the analytical phase was the thematic analysis of the questionnaires where key themes and content were categorised (Bowling, 2014), thus enabling the formation of general codes and themes, which shaped the basis for further data analysis. Following the debriefs the data from the recordings was transcribed

verbatim, although this was a time consuming approach, it enabled the familiarising of the data which Braun and Clarke (2013) suggest is the first stage in the process of analysis, which on reflection, also promoted immersion in the data which began the process of further recognising key themes and similar content. Following transcription, the data was systematically read, and codes were assigned to key extracts of data using NVivo 12, building on the data from the questionnaires. In addition, short extracts of the data were identified to support the presentation of the research findings as suggested by Gilbert and Stoneman (2015). Following this process, the codes were reorganised into themes by using EdrawMind software which produced a mind map of the codes, allowing for further categorisation and the development of relevant themes which informed the next stage of the data collection process. Appendix 16 presents the initial mind maps generated during the preliminary stages of analysis, illustrating early coding decisions and the development of concepts prior to theme refinement.

3.9 Stage 5: Interviews

To develop further insight into the key themes emerging from the debriefs, individual interviews were conducted six months after the simulation. At this time, the senior students had transitioned into newly qualified nurses and were working across a range of NHS clinical environments, thereby gaining first-hand experience of the realities of professional practice. The junior students had progressed into their second clinical placement as part of their nursing programme and had therefore also accrued additional clinical experience. However, the senior students were uniquely positioned to offer valuable insights, drawing on both their retrospective reflections on the simulation and their experiences as registered nurses. Consequently, the senior students' dual perspective as recent students and newly qualified practitioners made positioned them well to provide rich and informed reflections on the impact of the simulation experience.

The use of interviews is a common approach in qualitative research, particularly case study research (Moule and Goodman, 2014) and are used to gather in-depth data (Maltby et al, 2015). Furthermore, the use of interviews, which can take several

formats: unstructured, semi structured, and structured (Grove et al, 2013), are arguable at its peak when paired with social constructivism due to its endeavour to investigate relational knowledge (Lin 2023). As the aim of the interviews was to explore key themes emerging from the debrief, a semi-structured format was used with the aid of a pre-prepared list of open-ended questions (Appendix 17). The questions focused on the emerging themes formed by thematic analysis of the debriefs and therefore aimed at further exploring key issues in greater depth or as Thomas (2021) suggests; drilling down to the core of the case. Additionally, this also enhanced the focus on the singularity of the phenomenon being studied as suggested by Simons (2009) and was the final stage of data collection where key themes emerging from the questionnaires and debriefs could be further explored.

All senior students who had completed the programme were contacted via email to participate in the interviews with five, now qualified nurses agreeing to participate. The interviews were undertaken online via zoom, due to continued COVID restrictions, with each lasting between 50 – 80 minutes. With the participants permission the interviews were also recorded, which allowed for transcription. Following thematic analysis, the data was then assigned to codes in NVivo 12, further building on the data from the questionnaires and debriefs.

3.10 Trustworthiness: Reflexivity, Generalisability and Credibility.

3.10.1 Reflexivity

Although the case study is a distinct form of inquiry, many have viewed it as a less desirable approach (Yin, 2018), with perceived weaknesses centred on a lack of rigour, with researcher's bias influencing conclusions, as such key to improving the validity of the research reflexivity was paramount. As a nurse, reflective practice has formed a key part of my professional practice, not only as a key requirement of revalidation as defined by the Nursing Midwifery Council (NMC) (2019), but also as a Lecturer within nurse education student awareness and understanding is often developed through experience as directed by Kolb's (1984) experiential learning

cycle. It is suggested ‘through the mirror’ writing promotes both reflexivity and reflection (Bolton, 2010) however there is clear distinction between them. Within reflective practice there is consideration of one’s own experience and how those experiences have changed, developed or grown, which is a personal endeavour with an aim to support professional and personal growth. However, reflexivity considers how an individual’s own ideas effect the interaction between others (Olmos-Vega et al, 2022), hence recognising how my own attitudes and behaviours can shape and affect others, or in this context, the study. Within qualitative research the reflections of the researcher as well as the participants are significant, therefore it was important to understand how my attitude, impressions and feelings affected the research process (Flick, 2018), as reflexivity reflects the researcher’s awareness of their connection to the study and their impact or effects on it (Whitaker and Atkinson, 2021).

As a nurse my professional identify has been shaped through professional socialisation where values and beliefs are central, which subsequently shape the unique way I act and respond. Coffey (1999) through exploration of her own research identifies how her role as a researcher and part of a team, led difficulty in divorcing her field work ‘self’ from her other ‘selves’; and instead, found that they had become interwoven. As such identity is not fixed or stagnant but can be a dynamic process moulded by many factors (Ashby et al, 2016), and I recognised the challenge of shifting between a multitude of ‘selves’, recasting myself according to the multitude of roles I was undertaking: researcher, debriefer and interviewer. Additionally, I have also undertaken several roles where I advocated for SBE, so although the researcher must engage personally in the research process (Coffey, 1999), greater focus was required which was supported by further self-reflection and the use of a reflexive journal, extracts of which can be found in Appendix 18.

Conversely, there are many positive aspects associated with being familiar to the setting and where the research was undertaken (Bonner and Tolhurst, 2002), with one clear advantage being the ease to gain access to that particular environment being studied, as well as accessing participants directly through university communication channels such as learning central. Moreover, being known to both the simulation team supporting the scenarios and the students ensured there was

already an element of trust developed. Additionally, adopting an emic perspective offers significant advantages, as the researcher is a member of the culture being studied and therefore brings a 'native' understanding to the research process. This insider perspective enables the researcher to relate to, directly interpret, and meaningfully contextualise the narratives and behaviours observed (Gerrish and Lacey, 2010). As a member of the nursing culture, this positioning allowed me to draw on my professional knowledge to deepen understanding of the phenomena under investigation and to facilitate the translation of theory into practice.

As the researcher is the principal instrument of data collection (Brewer, 2000), being familiar can therefore be viewed as advantageous, however it is also suggested that researchers cannot separate themselves from their translation of the research findings (Thomas, 2021), which highlights the importance of a reflexive approach. Certainly, there is potential for the researcher to translate the findings using past experience, however some could also assume this would add to the richness and transferability of the research into practice. As a novice researcher therefore, caution was taken to ensure I listened to the research, incorporating direct quotes, rather than imposing pre-conceived ideas regarding the subject area.

3.10.2 Generalisability

Case studies form a different line of inquiry from those where generalisation is expected to follow as the focus is on understanding why and how something has occurred (Thomas, 2021), subsequently, although case studies are being more frequently used in healthcare research, concerns remain whether a single case can be generalised more widely (Moule and Goodman, 2014). Conversely, it is the quality of the theoretical inferences that are made from qualitative data that is crucial to the assessment of generalisation (Bryman, 2021), as such, concept generalisation is proposed where even though specific instances can be different, the concept can still be generalised (Simons, 2009). The goal of case studies is therefore to generalise theories and not to extrapolate probabilities (Yin, 2018), additionally, it could also be argued the key concepts found in this study could be generalised to other programmes, as well as other professions.

3.10.3 Credibility

Historically, it has been recognised that because human interaction is grounded in culturally derived and shared structures of meaning, it is difficult for a researcher to approach interviews or focus groups as a completely neutral presence, particularly when they enter the research with predefined areas of interest (Morse, 1991). Polit and Beck (2017) further argue that interviews and focus groups require careful planning and preparation, including the construction and wording of questions, which may inadvertently influence participant responses and, consequently, the credibility of the findings.

In contrast, Parahoo (2014) notes that some qualitative researchers reject traditional notions of reliability and validity, instead emphasising concepts such as accuracy, truthfulness, and credibility. However, within this study, credibility was of particular importance, especially given my role as a single researcher, and deliberate steps were taken to enhance the trustworthiness of the findings. Parahoo (2014) further suggests that the validity of qualitative data is strengthened by the researcher's presence, as this allows for clarification of questions and probing of participants' responses to ensure meaning is accurately understood. This principle guided the research process throughout.

Through reflexive practice and careful methodological planning, my role was to remain critically aware of how my professional background, assumptions, and interactions with participants might shape the research process. Reflexive journalling, transparent decision-making, and ongoing supervision were used to support this process, ensuring that participants' voices remained central and that interpretations were grounded in the data rather than researcher presuppositions.

To further prevent any conflict of interests, a Lecturer supporting the research welcomed and supported the students during the simulation and I remained in the control room at all times not engaging with any students during the scenarios. In addition, during the debriefing process the model of debriefing was closely followed

and discussion focussed on student's feedback and reflections following the simulation.

3.11 Ethical Approval and Consent

Ethical approval was sought and approved from the School of Social Sciences Research Ethics Committee at Cardiff University (SREC reference 74) , due to the focus of the research external ethical approval from an external ethics committee was not required.

Following the recruitment process students were invited to sign the consent form using an electronic signature and email it back to my university email. As the third-year students were in clinical practice collecting the consent forms in person was problematic and could have potentially deterred student participation, as such electronic signatures are used and was seen as beneficial due to possible COVID restrictions.

Participants were informed that they may withdraw from the study at any time without giving reason and withdrawal would not impede them in any way (will not impact on their progress on the programme or their assessments). However, participants were also informed that although they may withdraw at any time without giving reason, their data already submitted may still be used in the project. In addition, prior to the project, I undertook research integrity training facilitated online by Cardiff University.

3.11.1 Conflict of Interest

As an academic member of staff known to the students' potential conflicts of interest are recognised and there was the possibility that students would feel obligated to take part in the research, with their participation potentially impacting their academic progress. Therefore, during the presentation to all students, I announced there was an opportunity to take part in a research study which did not form part of the

programme content and all those who were not interested could leave. In addition, during the presentation, and immediately before the simulation students were reminded that that participation was voluntary, and they did not have an obligation to participate. Furthermore, on all correspondence such as emails, presentations and the information sheet provided to the students it was further emphasised that participation was voluntary and would not have any impact on their academic progress or future assessments, and that all data will be used solely for research purposes.

Although the use of incentives to support the recruitment process is suggested (Green and Thorogood, 2018) this was not appropriate. However, as students were invited to attend the simulation during their placement blocks this would have potentially resulted in students being disadvantaged if they missed any placement hours. As simulation could replace practice learning (NMC, 2022) the Head of Nursing at Cardiff University was asked if the participants could receive practice hours if they did attend as it was a clear learning opportunity for students. This was agreed and students were able to claim 4hrs clinical placement time for their attendance which ensured they were not disadvantaged.

3.11.2 Risk Assessment

A full risk assessment formed part of ethical approval at Cardiff University, which included a risk that students may experience anxiety during the simulation due to embarrassment and/or performance or that third year students may feel unequipped to support the first-year students. To mitigate this risk, I observed the simulation live in the control room and there was one lecturer who I briefed available to offer support to students if required. If students become anxious or if there are any aspects of care that are seen to act as a danger to any of the students, the lecturer would have been asked to intervene.

Prior to the simulation third year students were sent the scenarios via e-mail so that they could familiarise themselves with the content, allowing them to ask any questions and discuss any concerns they had regarding the scenarios. In addition, at

the commencement of the simulation students were invited to attend forty minutes prior to discuss the simulation and were informed there would be a lecturer available to support them if required over the entirety of the scenarios. Within clinical practice third year students have several learning objectives that focus on supporting and teaching, and they will have had experience over their previous clinical placements as working as part of a team, therefore additional training was not seen as a requirement.

If students did become distressed or upset during the simulation the scenario would have been paused and support offered by the lecturer supporting the simulation, and if students were not comfortable to continue the simulation they could have been stopped at any time. Prior to the simulation students were reminded that it was voluntary and was not assessed, however if any further support was required following the simulation or group debrief, the students would have been offered 1-2-1 support by the Lecturers supporting the simulation and referral to student support services if appropriate.

As the research was facilitated during the end of Covid-19 pandemic, risk assessments were undertaken to prevent the transmission of Covid-19, including personal protective clothing as appropriate and the use of hand sanitizers. All equipment was thoroughly cleaned following each simulation.

3.11.3 Data Protection

The demographic data collected included the students' names, programme and level of study, age range and personal email address. Personal email addresses were requested to allow the researcher to contact third year students who had left the programme to participate in the interviews. All email correspondence with students was through my university email and accessed via a password protected laptop.

Video data from both the simulation and debrief was also collected and audio data from the interviews. All data was stored on password protected pen drive and video and audio recordings of the simulation and debriefing and consent forms were

transferred to the university OneDrive and erased from the recording device. This data was only be used for research purposes.

Raw data (video and audio recordings) were not made publicly available or shared outside of the University, or within the University except with the doctoral student's supervisors and, where necessary, by members of the University's governance and audit teams or by regulatory authorities). All personal data collected will be retained for a minimum of 5 years or at least 2 years post-publication and then destroyed in accordance with GDPR and Cardiff University.

The limits of confidentiality in group discussions which will take place during the activities and debrief was recognised as any information students shared was known to others in the group. All participants were asked to respect the confidentiality of the group discussion at the commencement of all debriefs.

Chapter 4: Findings of Questionnaire, Debrief and Interviews

4.1 Introduction

As the focus of the research was to investigate the effect of peer learning through simulation-based activities on the development of adult nursing students' professional socialisation, this discussion will focus on these wider reflective comments and not discussion around the actual scenarios. Although it is acknowledged the scenarios were a learning opportunity for all students, in the context of this research they will therefore subsequently act as a vehicle to consider the objectives of this research. Following thematic analysis of both debriefs and interviews, it was clear that dialogue went beyond the focus of actual simulation and stimulated wider reflections relating to their overall experience, resulting in an initial seven recurrent themes (Table 4).

Table 4: Selected Themes

Initial themes	Selected Themes
1. The Clinical Environment	1. The Simulation -Based Learning Environment
2. The Simulated Environment	
3. Role of the Supervisor in practice	2. The Role of the Peer Mentor
4. Role of the 3rd Year Student as Mentor	
5. The Learning Process	3. The Learning Process
6. Students Feelings and Confidence	4. Students Feelings and Confidence
7. Transition from Student to Nurse	Removed

Following discussion with my supervisors, it became evident that two initial themes; the clinical environment and the role of the supervisor in practice, did not directly inform or align with the three key research questions. Furthermore, emphasising these themes shifted the analytical focus away from students' experiences within the simulation-based learning environment.

Consequently, aspects of the first theme were integrated into the theme exploring the impact of the simulation-based environment on students' development and learning, enabling contextualisation through comparable reflections drawn from the

clinical learning environment. Similarly, elements of the second theme relating to the role of the supervisor in practice were incorporated into the theme examining the role of the near-peer mentor, allowing relevant comparisons to be maintained. Merging these themes, as illustrated in Table 2, facilitated a stronger alignment with the research questions underpinning the study.

The third theme remained unchanged, focusing on the learning process, as did the fourth theme, which explored students' feelings and emotions. Although the data also revealed a prominent theme concerning newly qualified nurses' (NQNs) transition from student to registered nurse, this fell outside the scope of the current research. While this theme offers a valuable and unique perspective, it was excluded from this chapter and will be disseminated as a separate piece of work.

As such, this chapter presents four core themes that emerged from the thematic analysis of questionnaire responses, debrief discussions, and interview data.

4.2 Theme One: The Simulation -Based Learning Environment

The clinical learning environment provides valuable opportunities for nursing students to put their theoretical knowledge into practice with real or simulated patients (Weerasekara et al, 2023) and plays a major role in the professional socialisation of student nurses. This theme will consider data accrued in this study regarding student's perspectives of SBE as a learning experience, initially considering the results of the questionnaire and then incorporating discussion from both the debriefs and the interviews with NQN's.

The five-point Likert scale in the questionnaire asked students to rate how much they valued learning within a simulation-based environment, ranging from 'very much' to 'not at all.' All 31 students who participated in the study completed the questionnaire, with 100% reporting that they valued simulation-based learning 'very much.' While these results suggest a strongly positive perception of simulation, it is important to note that all participants had volunteered for the study and were informed about the use of simulation prior to providing consent, which may indicate that they already held favourable views of simulation as a teaching strategy. However, since the

questionnaire was provided immediately after the simulation session, students' responses may have been influenced by their immediate experience, potentially reflecting their reported value of simulation.

In response the open-ended question, "how do you value learning within a simulation-based environment," students commented on simulation as a safe place to learn as if something goes wrong it is not going to have an impact on patient care, with one senior student commenting:

"it gives the opportunity to learn in high consequence situations without high consequence" (Questionnaire: Senior Student)

In response to the question, 'What did you value most about the day?', students commonly reported that learning together and from one another were key positive aspects of the experience. This is a significant observation, particularly in the context of the COVID-19 pandemic, during which opportunities for face-to-face simulation were limited due to social distancing measures. As such, interacting with peers in a shared learning environment had not occurred for some time, making the collaborative aspect of the simulation especially valuable.

In the questionnaire, students also commented on the relaxed, less stressful nature of simulation, attributing this to the controlled environment, with one junior student noting, *"It is a safe space to put our clinical skills into practice with less pressure." (Questionnaire: Junior Student).* Responses consistently described simulation as a comfortable environment in which students feel supported to develop their skills and gain experience in caring for a variety of patient scenarios. The term *"comfortable"* appeared four times across three of the debrief sessions, with one student suggesting:

"I don't know. I found it really beneficial, but I couldn't exactly say why. I just felt like it was a comfortable situation".

(Junior Student Debrief One)

When the NQN's were asked during the interviews, whether the simulation was a valuable learning experience, their comments again focused on the relaxed nature of the environment with one NQN remarking:

"I think it enabled us, I didn't feel any pressure. I don't think anyone felt any pressure. It was so you know, relaxed not too formal. We were all learning, I was learning as well. It was just a fun day. There was no reason for us to feel under pressure whatsoever"

(NQN Interview Two)

Comments describing the simulation as 'fun' were somewhat unexpected and could initially be viewed as a cause for concern, given that the simulation was designed to replicate real clinical practice. However, one newly qualified nurse (NQN) linked the relaxed environment to knowledge development, noting that it provided a valuable learning experience for both junior and senior students, aligning with the intended learning outcomes. This perspective was echoed by another NQN, who explained that although the simulation felt realistic, the atmosphere was more relaxed and liberating, attributing this to the absence of formal assessment, which reduced pressure for both themselves and the junior students. Consequently, it was suggested that the simulation fostered a relaxed environment, or learning culture that effectively supported the educational process.

When considering students feedback regarding the clinical learning environment, students views were paradoxically different with students feeling unprepared for the reality of clinical practice, with two junior students suggesting this was a common feeling amongst their cohort:

Participant 1: Even on the wards though, I feel like I've been thrown in at the deep end and I'm drowning

Participant 2: Do you know what, I've put that in the group chat and everyone feels the same way

Participant 1: Yeah

Participant 2: They feel like they've been chucked in, they feel overwhelmed

(Junior Students Debrief Three)

To counter feelings of being overwhelmed in clinical practice, several students reported choosing to work alongside Health Care Assistants (HCAs) rather than their assigned supervisors. HCAs provide essential patient-facing support and are primarily responsible for delivering fundamental care and the university actively encourages first-year students to work with HCAs, as gaining experience in supporting patients with basic needs, such as washing and dressing, is considered a crucial foundation for professional development. This approach is intended to serve as a building block in the students' training, hence given that fundamental care is often facilitated by HCAs, it is logical for students to engage with them early in their education to acquire these essential skills.

Additionally, feedback also pertained to a challenging culture students work in when in practice. This was further considered in the interviews, where NQN's were directly asked how the culture of the workplace affects the quality of their practice, with one participant stating:

"It really affects it. I don't think it would take long for a whole team to start doing something wrong, and the standards start slipping. It takes one person, then someone thinks, oh, yeah, well, I'm going to do that, If you're doing it, I'm doing it. Then another person, another person and the standards just slip and slip, and it's so easy to be somebody to be caught up in it all. You can't teach students that doesn't happen. You can't be naive to the fact that it happens because it does, and that's how incidents happen."

(NQN Interview Three)

One NQN attributed a potential decline in standards of practice to a workplace culture in which staff replicate one another's behaviours without questioning them, simply "*going along with it*" and becoming "*caught up in it all*" *(NQN Interview One).* Another NQN reflected on their experience in their first post-qualification role, suggesting that the prevailing culture of the workplace had a significant impact on them both professionally and personally, ultimately prompting them to seek alternative employment. This individual described culture as "*working together as a unit,"* in contrast to their previous environment, where it felt like "*every man for themselves*" and there was a noticeable lack of camaraderie and teamwork *(NQN*

Interview Two). In their new position, they described the culture as "*great*," attributing this to effective communication among staff and the multidisciplinary team (MDT), with a shared focus on enhancing patient care.

Students also noted that simulation provides valuable opportunities to practise clinical skills that they may have had limited exposure to in practice, often due to the reported busyness or acuteness of clinical environments, which in turn affects the level of support they receive. Beyond practising familiar tasks, students also recognised the chance to engage in new and unfamiliar aspects of care, such as supporting a patient who wished to make a complaint, an experience some junior students had not yet encountered in clinical placements.

However, across all debrief sessions, discussions emerged regarding the extent to which simulation can realistically replicate clinical practice, with two distinct viewpoints evident. Those who questioned the authenticity of simulation focused on the limitations of performing skills on simulated patients, particularly tasks such as administering injections or removing a cannula, both of which were included in the scenarios. For example, during the simulation, injection pads were worn by the simulated patients to replicate the sensation of giving an injection. However, one student suggested:

"In practice you don't know what's going to crop up. Whereas I mean, in simulation there are limits aren't there? Uh you know you're not actually delivering an injection whereas if you're in practice you would be hitting that injections. So Um, I suppose it's the limits of what you can do in simulation.

(Senior Student, Debrief Four)

Moreover, one junior student observed that normally they would tailor their communication to align with a patient's personality, background, and accent; however, during the simulation, they found themselves adopting a more formal manner due to the presence of filming. Similarly, a senior student admitted to overthinking the scenario, noting that it did not feel entirely authentic. To enhance realism, third-year students were assigned to play the role of patients, nonetheless,

several participants commented that the quality of the acting impacted the overall learning experience. As one junior student remarked:

"Um it did feel real for like some of the patients. Like especially the first one that felt real cos I have a similar patient so, combative, aggressive, so that felt quite real"

(Junior Student Debrief Two)

This view was supported by a senior student who suggested, "*the more real the patient, the greater the effect on your behaviour*" *(Senior Student Debrief Two).* Furthermore, students reflected on how closely the simulation mirrored reality, noting that the realistic patient encounters sometimes made them feel uneasy or sad, indicating a deep level of immersion in the simulation-based environment. This immersion is further illustrated by a student's reflection on a patient experiencing confusion, as described in the following extract:

Facilitator: So, the next patient was Gladys Potter, so how was Gladys?

Participant: She was very sweet

Facilitator: Was she confused?

Participant: She kept asking where she was.

Facilitator: Is that realistic?

Participant: Oh yeah, definitely

One junior student exemplified how the simulation felt like a real situation by describing their panic when the patient demanded to see a doctor, and how their agitation increased as the patient's voice grew louder. Interestingly, another junior student, who had previously suggested the simulation did not feel entirely real, also expressed strong feelings of anger towards the doctor who refused to come to the ward, citing being too busy, and stated:

"You know I was really confused then cos I was thinking why would she have said that? Why would she say 'I'm busy'? That's not therapeutic, is it? Sometimes it's justifiable, sometimes it isn't, it depends on the person you get. Sometimes I'm genuinely busy, to want to deal with that situation? I've seen it before. And I'm sure I'll see it again"

(Junior Student: Debrief Three)

It could be argued that the clear expression of anger was somewhat contradictory to the student's earlier report that the situation did not feel entirely real. However, another student reflected on the issue of time constraints, noting that, as the patient in the simulation was simply waiting in bed and clearly prepared, they were uncertain whether this aspect was better or worse compared to a real clinical environment. This highlights the importance of careful planning in creating successful simulation-based learning experiences, given that the environment is controlled through the use of scripts and time limitations. Nevertheless, students also identified a distinct advantage of simulation: the ability to 'press pause' to ensure they were undertaking the correct course of action. This was further supported by comments emphasising that simulation allowed them to work at their own pace and provided opportunities to reflect more deeply on the care they delivered.

The simulation was also an opportunity for junior students to practice skills with one student stating:

"I think that was nice because where I am on placement I haven't really dealt with wounds. It's a rehab unit and there's only one patient who's got a wound and I haven't dealt with that patient myself and it's every two days so I would have to be there on a day and do it. I have only practiced it in University once so it was nice to be talked through it again. I think when you are asking questions in front of the patient it makes the patient more on edge cos they are like "OMG this person doesn't know what they are doing and they are touching me"

(Junior Student Simulation One)

In this context, the simulation provided an opportunity for students to further apply theoretical knowledge to practice and to experience situations they may not have previously encountered in the clinical setting, echoed in the questionnaire by a junior student who highlighted the importance of understanding the 'big picture' and managing 'difficult situations.' Additionally, during the debrief, two junior students discussed the process of patients making a complaint and acknowledged their awareness of Datix, a risk management system used to report and manage clinical incidents, although they had never observed its use in practice.

However, when reflecting on the application of theory to practice, students also reported discrepancies between what was taught at university and what they observed in clinical environments. During the simulation debrief, the clinical setting emerged as a key topic, with one student providing a specific example related to clinical skills, describing learning a particular injection technique at university but witnessing different practices while on a community placement, commenting:

"I did a reflection on aspirating before giving an IM (intramuscular) injection, on whether or not you should do it and the most recent guidance is you don't if it's in the arm, but all of the district nurses still do and they are sort of "you haven't aspirated that". I know you do not have to anymore, but I find it really difficult"

(Junior Student: Debrief One)

This clearly highlights potential discrepancies between theory and practice; however, it is equally important to acknowledge the challenges students face in navigating these differences within the clinical setting. This was further illustrated by a senior student who described their experience with a supervisor while caring for a patient requiring feeding via a percutaneous endoscopic gastrostomy (PEG) tube, a device used to provide nutrition to patients unable to eat orally. The student explained that they had prepared for this task through an online learning platform recommended by the University, which emphasised the importance of flushing the PEG tube before and after administering each medication. However, during their placement, their supervisor stated, "*you don't really have to but do if that's the way you have been taught*," *(Senior Student Debrief One),* leaving the student confused and uncertain about the correct procedure.

Another senior student reflected on how these inconsistencies between university teaching and clinical practice become even more pronounced when starting a new placement. They noted that even seemingly simple actions, such as making a bed differently, can be met with disapproval, making them feel "*back in their first year*" *(Senior Student Debrief Four).* It was evident from these discussions that such experiences not only complicated the students' learning but also contributed to confusion, potentially undermining their confidence and impacting their overall performance in practice.

Furthermore, students were asked how they felt about the potential differences in what the university taught through skills and simulation and how it is practiced in the clinical arena. In response students suggested they should be doing things the same way, however, they find it difficult to constantly challenge the staff who are supporting them, illustrated by one student who stated:

"Yeah. I think a lot of the time on placement nurses don't do it 'by the book' so you almost feel pressurised to not and it's like you do it 'by the book' and it's a really odd situation"

(Senior Student Debrief One)

This is a concerning position, as it suggests that although students perceive simulation as an opportunity to practice and acquire new skills and knowledge, the same standards of practice may not be consistently upheld in clinical placements. When exploring potential reasons for these discrepancies, junior students expressed that increased practice at university would help build their confidence to perform clinical skills '*by the book*.' In contrast, senior students identified additional factors such as time constraints, workplace culture, and the experience level of nurses as key influences on clinical practice.

This emerged as a significant theme during interviews with participants who had been newly qualified for six months. These discussions further explored the gap between university teaching and clinical reality, with one newly qualified nurse remarking:

"It is true to an extent, there are differences, but it depends what kind of nurse you work with"

(NQN Interview One)

An example provided by a NQN referred to wound dressing, where they observed that some nurses adhered to the 'proper technique,' while others did not follow every step of the procedure precisely. At first glance, this might be considered poor practice; however, the NQN suggested that these were minor deviations, small adaptations made by nurses in their approach. This view was further supported by

another NQN, who noted that although nurses may perform skills and procedures differently, this does not necessarily constitute poor practice. Nevertheless, such variations can make it challenging for both NQNs and students to learn effectively. The concept of ‘adaptation for practice’ was explored further by another NQN, who proposed that while it is crucial for the University to teach the ‘gold standard,’ some compromises in clinical practice may be inevitable, stating:

“Sometimes it just doesn’t happen. For example, manual handling, obviously manual handling training is to protect us as well as the patient, you know. People say, oh, make sure you do it right, make sure the beds at the right high because of your back. But you know if somebody is in an awkward situation, and you need to get them out, because the patients airway is compromised, you’re going to do what you can”

(NQN Interview Two)

When considering moving and handling, this refers to supporting patients to mobilise or transfer from a bed to a chair for example, and forms part of students annual training where they are taught, and updated, on how to use mobility aids such as hoists and slide sheets, to ensure patient comfort and safety. Additionally, annual moving and handling training is mandatory for registered nurses to ensure they are up to date with current practice. Whilst the NQN also acknowledged some nurses may get complacent, they referred to this as the ‘reality of practice,’ suggesting that every working day and patient is different where as a textbook may only have one perfect patient, therefore suggesting care needs to be adapted for that individual.

Within the questionnaire there were also comments referring to the variety of approaches that were adopted and discussed during the simulation when caring for patients with complex needs. These can be summarised by one student who reported:

“It was crazy to see but sometimes one answer is not always the only one, every student answered questions and the scenario differently, some had similar solutions but all adapted differently.”

(Questionnaire: Senior Student Acting as Patient)

Furthermore, interviews with NQN's revealed a pragmatic perspective: they acknowledged that although clinical practice may differ from what is taught at university, these variations do not necessarily constitute poor practice, and multiple valid approaches may exist. This defence of alternative practices was exemplified by one NQN who stated that, "*as long as it's evidence-based, in the person's best interests, and does not cause harm, the practice is valid" (NVQ Interview Two).* They further suggested that junior students might perceive such differences as bad practice due to their limited understanding of the complexities involved.

Moreover, another NQN highlighted the educational value of exposing students to diverse approaches, suggesting that witnessing different practices encourages reflection on whether they will "*simply follow*" others or exercise their own professional judgement *(NVQ Interview Three),* a process that serves as a test of professional values. The NQN also recommended that universities should openly prepare students for the reality of encountering varied practices, enabling them to make informed decisions about whether to follow established norms or adhere strictly to best practice standards.

When interviewing one student however, they further explored what differences in practice means for new NQN's in the clinical area stating:

"It does affect us, it's so busy and it's difficult, I see that now. People will do one thing, and they'll say, no this is right, then I'll see it, and they say, no, this is right, and I'm so torn, and I'm like one of you has got to be wrong here"

(NQN Interview Five)

The NQN here also points to a busy environment, which may act as a catalyst for these differentiations in practice, suggesting later in the interview that due to the stressful environments if a mistake does happen some staff **don't care about it as much" (NVQ Interview Five).* Furthermore, if staff see poor practice, they may not report it as this would add another layer of stress to an already difficult environment, which suggests the importance of an effective workplace culture and how the busy nature of clinical environments can affect the care provided.

As patient safety is paramount in the clinical arena, students also reported the benefits of simulation which allowed them to make mistakes without the risk of harm to the patient with one senior student remarking:

"I just felt like it was a comfortable situation where you could practice and discuss things more openly, and like it was a comfortable situation to find out what you should do and how to do things differently rather than being put on the spot and thrown in the deep end on a ward because you aren't playing with anyone's lives"

(Senior Student, Debrief Three)

This perspective was echoed by junior students who highlighted the advantage of simulation in providing a safe space where they could 'mess up' and make mistakes without the risk of harming a real patient. One student emphasised that errors made during simulation were inconsequential, stating that nothing could truly go wrong, which implies a level of immersion and engagement with the simulation-based learning experience. Another student expressed appreciation for the opportunity to make mistakes in a controlled environment, recognising simulation as a valuable learning tool. This notion was further reinforced by a senior student who described simulation as a chance to take control of patient care management, without the pressure and anxiety of potentially missing critical steps. The theme of control was similarly supported in a separate debrief, where a senior student remarked:

"Um I felt it was nice because normally on placement you don't normally get to take control in any way so you kind of more listening and watching but you don't always learn that way but when you are the one who is dealing with the situation"

(Senior Student, Debrief Two)

This comment suggests that students experienced greater accountability and autonomy within the simulation compared to the clinical setting, where they are typically supervised by a qualified nurse, which may be crucial in preparing them for their future roles as newly qualified nurses. A prominent theme that also emerged from both senior and junior students' questionnaire responses was their overall enjoyment of the simulation experience, particularly appreciating the opportunity to

collaborate with peers. Notably, students valued the chance to learn alongside one another, with junior students benefiting from the guidance of their senior peers. Additionally, one NQN also considered the importance of a safe environment, stating:

"We shouldn't be testing students'. We should be nurturing them, in the simulation they were nurtured in a safe environment to then go out into the bigger environment where you know they are with a nurse, and it may be a bit more daunting"

(NQN Interview Five)

This NQN clearly perceived simulation as a crucial stepping-stone toward clinical practice, while reinforcing earlier perspectives that simulation provides a comfortable environment where junior students are nurtured rather than tested. Furthermore, the comment highlights simulation as a precursor to the often daunting clinical environment, suggesting a notable gap between theory and practice.

This theme explores students' experiences of simulation as a learning environment. Overall, students overwhelmingly viewed simulation as a comfortable and supportive experience, however, some expressed concerns that the authenticity of simulation did not fully replicate the realities of clinical practice. Despite this, simulation was acknowledged as offering valuable opportunities to practice skills that students might rarely encounter in their clinical placements. Additionally, students reported the differences between what is taught at the university and is seen in the clinical environment. The quality of the simulation was also seen to be significantly influenced by the performance of the individual playing the patient role; the better acting skills, the more realistic the simulation felt.

4.3 Theme Two: Role of the Peer Mentor

While the clinical environment facilitates the acquisition of essential proficiencies among nursing students (Cuesta-Martinez et al, 2024), mentoring remains crucial in guiding and supporting students, with mentors acting as role models who aid professional socialisation. This theme explores student data regarding the role of senior students as peer mentors during simulation.

When reflecting on their experiences in the simulation, junior students expressed overwhelming positivity about being supported by third-year students. The concept of support emerged consistently across all debriefs, with junior students feeling reassured by the presence of more knowledgeable senior peers who could prompt and guide them to ensure effective care delivery. Moreover, the encouragement provided by senior students was highlighted as a vital component of supervision, aimed at fostering confidence. One junior student even described feeling '*spoiled*' by working so closely with their supervisor:

"I suppose I felt really spoiled by it to be fair and I overthink a lot so it's just like, we will be fine do you know what I mean. It was nice to get encouragement as well yeah just saying 'oh you did that really well yeah".

(Junior Student Debrief Four)

This comment regarding feeling spoilt refers to an opportunity for them to work on a one-to-one basis with their peer mentor, reaffirmed by another junior student who stated "*I felt that it was nice to be able to have someone there with you*" *(Junior Student Debrief Four).* The simulation-based environment provided time for the students to communicate as it was clearly less pressurised than being in clinical practice where students reported their mentors often do not have sufficient time to support them due to the busy nature of the placements with one student suggesting:

"They're kind of busy, rushed and they're like 'you can just watch for now' and 'you can do it later' whereas you never know when that later is, because they are so busy they just do it themselves. They will tell you to go and do other things, like take observations and all that and you just can't find them again like for a few hours"

(First Year Student Debrief One)

The concept of supervisors not having sufficient time to support students was mentioned repeatedly in the debriefs, however it is important to acknowledge that at the time of the study, the demanding nature of the clinical environment was further intensified by the Covid-19 pandemic. As the third-year students were on a previous placement during the outbreak, it could be argued that their experiences differed significantly from those of the junior students. Nevertheless, the fast pace of the clinical setting led some students to report that they were merely "*following their*

supervisor around" While one student viewed this experience positively, stating they felt "*lucky she was happy to show me*," another likened themselves to a "*lost puppy*," highlighting the variability in students' perceptions of support *(First Year Student's Debrief Three).*

Interestingly, students' comments about feeling supported in practice focused exclusively on their direct interactions with their mentor, with no references made to the wider healthcare team. In clinical practice, a student's Practice Assessor may be responsible for a group of 10 to 15 patients, depending on the ward structure. Additionally, Practice Assessors are often engaged in various tasks, such as collaborating with members of the multidisciplinary team (e.g., physiotherapists, medical staff, speech and language therapists), administering medications, and liaising with patients' families. These responsibilities can significantly limit the time available to support students on a one-to-one basis. Moreover, when Ward Managers act as supervisors, their management duties may further reduce their availability for student engagement. In contrast, the close working relationship established in the simulation-based environment was viewed by junior students as a key benefit, particularly in terms of boosting their confidence, as one student remarked:

"In the first place I didn't know what to do I was just standing by, but I was looking at the 3rd year student acting more like a supervisor. Like trying to tell me what to do, to advise me, saying we need to do this and very supportive. They gave me confidence because if they weren't there, I wasn't going to do anything. I didn't know where to start".

(Junior Student Debrief Three)

This comment highlights the value junior students placed on having a senior peer available to offer guidance and support. The presence of a more experienced student was perceived as both reassuring and beneficial for learning. Furthermore, one NQN reflected on this dynamic, suggesting that junior students often gravitate towards their senior peers in clinical practice, as they feel they are "*on the same page*" (*NQN Interview Five).* This observation implies a natural camaraderie among nursing students, stemming from a shared understanding of the student nurse

experience and a collective commitment to learning. This sense of solidarity was further explored by another NQN, who stated:

"When I was it my first placement of my third year, there was a first year student there as well who wasn't that supported, so she kind of came to me like, I didn't need to approach her. She just came to me, and was asking me questions, and I was like given advice, you know not teaching, but just given advice and showing her where things are kept. I just think students gravitate towards students and not just nursing students"

(NQN Interview Two)

Within this extract camaraderie manifests itself with the senior student offering support and guidance within the clinical arena, suggesting the senior students were more approachable, however it could be argued some students are more approachable than others, similar to supervisors in practice. This was exemplified by two students who suggested they felt they were less annoying than when they ask questions in practice, suggesting:

"I think for me is um being more able to ask questions, not being afraid to ask questions, cos there have been times on placement where I think I have been annoying but I need to be able to do it to improve and learn things on placement"

(Junior Student Debrief One)

"They sort have recently been where you are now, where you don't really know anything. It's like I definitely asked more questions than what I would have on placement cos I feel like I'm just being annoying"

(Junior Student Debrief Four)

These statements may reflect the realities of the ward environment, where mentors are often preoccupied with the demands of their nursing roles. However, a significant point raised was the junior student's suggestion that they felt more comfortable seeking support from the senior student, who had more recently experienced the academic programme and therefore appeared more approachable. When discussing their experiences with qualified mentors in practice, both junior and senior students highlighted that the attitude of the supervising nurse was a crucial factor in shaping

the overall quality of their placement. This sentiment was clearly illustrated by one student, who reflected on the attitude of their supervisor during a previous placement:

"Sometimes they are not being approachable. You can tell by their demeanour. Um, sometimes they are very intimidating the way that they speak to you. I had that actually with a placement that I'm on now so I actually spoke to her about it and said I was concerned and in fairness like she acts completely different now. I don't know whether she just didn't realise. I would ask her to like show me things and she literally sigh, she'd be sighing and I'm like "You're meant to be teaching me!" She'd be sighing, she'd be running off, I'd be like where's she gone? and she just leave me for hours and I would just be there on my own."

(Third Year Student Debrief Three)

It was noted during the debrief this student was very animated when discussing these concerns, further exacerbated due to the fact this was their final placement, hence they needed to complete a number of additional assessments to ensure they were able to complete their practical assessment which adds additional pressure. It is also striking that the student had the confidence to challenge their supervisor's attitude towards teaching them, however it could be argued the busy nature of clinical environments can also have a significant effect on what the supervisors perceive as the greatest priority. Nonetheless, when considering the attitude of the supervisor, one student discussed how having a 'poor supervisor' made them feel:

"You don't want…It's just don't want to be there. Sometimes they make you feel…intimidated. And you're like what's the use. You actually know you need to talk to them because you need to get things signed off but you don't want to talk to them. So then you're actually in a way making it worse for yourself because you need to but you just kind of avoid them, um, I've just like not wanting to do shifts with them, I just want to like change my shifts and be not be with them, but you need to"

(Third Year Student Debrief Three)

Although it is important to acknowledge that this was a single student's experience, it was evident during the debrief that many students expressed agreement through

gestures of support or empathy. The students' comments revealed a tension between feeling reluctant to work with their supervisor and recognising the necessity of engaging with them in order to complete required competencies. Notably, one student suggested that a supervisor's attitude may be influenced by their prior experiences with students, stating that some supervisors can appear 'a little wary' or 'judgemental' until they become more familiar with the student.

When reflecting on supervision in practice, the majority of student comments were negative, with concerns raised about their supervisor's clinical practice, motivation, and limited time available for student support. However, it is important to highlight that several students also described positive supervisory experiences, including one student who remarked:

"I had a lovely supervisor who pretty much said 'you need to be the change you want to see'. So if you know you are doing it to your best and most recent practice, you need to be doing it, and other people can watch and take note from that. As long as you feel proud of yourself for doing it right, that's the way you do it"

(Third Year Student Debrief Four)

This was a particularly insightful comment, as it not only describes a supervisor who was encouraging and motivating but also implies a recognition of the need for change within the practice environment. It underscores the significance, articulated by one NQN, of "*getting on*" with your assessor in practice *(NQN Interview Five)*. It is important to note that most student placements last between six to eight weeks, with the exception of the final management placement, which is typically 12 weeks. During this time, students must rapidly acclimate to the clinical environment and establish effective working relationships with their assessors who they may work with for less than 50% of their time on placement. One NQN expanded on the challenges and importance of building these relationships, commenting in detail on the potential barriers to, and impact of, the student-assessor dynamic:

I can remember my first placement ever, I've come straight from college. So I was young myself, and that figure of like authority was there, my mentor. I felt like I was at school again, they are watching everything I do, they judging me, looking over me. I couldn't develop a relationship with them. And oh, the difference I had in relationship between my Mentor at the beginning and my Mentor at the end,

completely different. I used to think to myself on my first placement if go in the car with them I wouldn't even talk to them, I'd be so petrified. But my last mentor, It was like she was one of my friends, you know I don't know where it came from. Maybe confidence in my ability as I became older and I would say age as well. I think you respond better to people your own age, but you also respond better to people that you identify with you as well"

(NQN Interview Two)

This NQN reflects on how their inexperience and age may have inhibited an effective relationship with their supervisor during their first placement but also touches upon the importance of working with someone who may identify with you.

Another key theme that emerged from discussion in the debriefs was the idea that senior students were able to empathise with the junior students which subsequently enhanced their learning experience. This was further discussed in the interviews with one NQN stating:

"It's that empathy element to it. We know the struggles they are going through. We sort of know how deadlines work. I know you can be on placement, and still have assignments to, and we also know what kind of level they should be at, or what kind of things we should be showing them for that particular time of the degree. I think it's just we are more up to date with what they are going through and what they need"

(Senior Student Debrief Two)

It was evident that the working relationship between students had a positive influence on their experience, with effective communication emerging as a central factor in their progress throughout the simulation. This was particularly highlighted in the comments of one senior student:

"You just have to encourage them a little bit, but she was just doing everything. We just talked to each other, I didn't say you should do this at that time, it was more explaining the evidence behind everything that we were doing"

(Senior Student Debrief Four)

This suggests that the level of communication was enhanced by the students' comfort with one another, with some describing the experience as a two-way learning process, with one senior student commenting that they "*were learning things as well" (Senior Student Debrief Four).* Notably, this mutual learning appeared to be facilitated by a perceived lack of hierarchy, where students did not feel judged by one another. The theme of not feeling judged also emerged in the questionnaire responses to the question, *"How did working with junior/senior students affect your experience?"*, with six students reporting an increase in confidence. One junior student stated, *"It made me more confident as I felt like they were not judging me, so I found it easy to communicate with them."* These comments suggest that junior and senior students identified with each other, and that their shared experiences may have naturally fostered a connection.

However, it is also important to consider how the simulation-based environment may have contributed to this relationship. Students consistently described the simulation as a '*real-life'* yet comfortable environment, in which tasks were '*worked through together*.' It is also significant that the simulation was not part of a formal assessment, and therefore students' practice was not subjected to the scrutiny typically encountered in the clinical setting. During interviews, NQNs were asked whether this absence of assessment influenced their relationships with junior students:

"I think yes, because, you know, the student has the portfolio in the back of their mind. For the student, it's almost like you're on that pedestal, whether you like it or not. You have to remain professional, even a break times, for example, because your mentor (supervisor) might mark you down for something. So, at least with a student who isn't assessing you, there is that space to make mistakes to ask questions".

(NQN Interview One)

This statement suggests that the absence of formal assessment and scrutiny allowed students to feel more comfortable asking questions, thereby contributing to a more supportive and relaxed learning environment. This perspective was reinforced

by another NQN, who noted that the 'pressure was off' during simulation, which not only fostered a richer learning experience but also strengthened the working relationship between junior and senior students. Moreover, the NQN proposed that because junior students did not feel judged, they felt freer to ask questions about patient care than they might have in a real clinical setting, stating:

So they kind of open up a bit and they are more confident to ask questions and step forward and participate. Sometimes you are told something when you're being assessed, and don't quite get it. But you don't really want to go there and ask the question. You just kind of brush it off. It's just the pressure, I guess it does happen. It happens to me sometimes even now.

(NQN Interview Two)

This comment highlights the impact of fear of judgment on students' willingness to ask questions in practice. A NQN described how this fear can provoke a sense of panic in students, stating: "*they're going to think I'm so bad they're never going to sign me off, and I'm not going to get this signed off and that signed off" (NVQ Interview Two),* which illustrates that the pressure of being judged in the clinical environment not only increases stress but may also adversely affect students' performance due to fear of failure. Consequently, students reported hesitating to ask questions during placements for fear of embarrassment if supervisors assumed they already possessed the necessary knowledge and understanding. This issue was reflected upon by a third-year student recalling their earlier experiences as a junior student:

"I know as a first year, I could have used a lot more support, cos it's a really busy environment. I was on colorectal for my first, it's really, really full on and you don't always get those opportunities to say, to feel like you can say to someone 'I don't know what I'm doing here, what do next?' without feeling a bit daft"

(Senior Student Debrief One)

The importance of asking questions not only reflects a student's motivation to learn but also constitutes a fundamental part of the learning process. This was acknowledged by one junior student who admitted that, despite feeling as though they might be perceived as '*annoying*' *(Junior Student Debrief One),* they recognised

the necessity of asking questions to enhance their understanding and achieve their learning outcomes. Conversely, if students feel reluctant to ask questions because their mentors are perceived as too busy, this reluctance could negatively impact their attitude score, a component of the student assessment completed by those same mentors. Ironically, the pressure associated with assessment may further discourage students from seeking clarification or reaffirming their knowledge, posing potential risks to both their professional development and patient safety. This dynamic was further highlighted by a NQN who recalled feeling intimidated when questioned in practice, especially in the presence of other staff. Moreover, another NQN described how students often face a no-win situation:

"Students will obviously be assessed by mentors. So I think they are scared as well that if they get something wrong they might mark them down or say that they haven't been able to achieve something which is a bit unfortunate. Let's say, a student might be struggling with something, and then the Mentor might assume that the student is not willing, and then they might just mark them down for that placement. So it's a bit sad. So you don't know something you're afraid to ask because you're afraid you're gonna be marked out for asking"

(NQN Interview One)

This statement highlights the complexity inherent in students' assessment within practice settings, where students may find themselves in a dilemma: asking questions risks their mentor perceiving them as lacking understanding, while refraining from asking questions risks their assessor interpreting them as disinterested. This presents a significant quandary, particularly for students who are naturally quieter or less confident, who may hesitate to engage fully or feel like an imposition when their supervisors are busy. This challenge was exemplified by a senior student who reflected on the pressures faced in such situations:

"My supervisor, she did allow me to like follow her around but she asked like, have I done this before and I was like "No" and I felt guilty for not knowing that. I was lucky she was happy to show me and everything but you did feel like you were taking up their time and then about half way through the shift she asked me if I wanted to go

with the assistant to go do some washes and things like. So it's mixed, depends where you go on placement"

(Senior Student Debrief Two)

This comment illustrates that, despite being in their final year of the programme, the student still highly valued close working relationships with their supervisor, which may reflect the challenges of adapting to a new clinical environment. It is also important to acknowledge that student focus often aligns with their current proficiencies and learning outcomes outlined in their clinical portfolio, consequently, the expectations placed on junior and senior students differ significantly. While all students are expected to support patients' fundamental needs, senior students typically concentrate on managing patient care and collaborating with the multidisciplinary team. For senior students, performing fundamental care, although essential, may sometimes be perceived as detracting from their broader learning objectives. Nevertheless, this highlights the critical importance of cultivating an effective assessor-student relationship founded on openness and trust. One newly qualified nurse suggested this dynamic was evident in the simulation setting, where junior students felt empowered to ask questions:

"I think this you don't have that pressure from another student. You in the same colour, so it's kind of, it's more of a buddy sort of system than a mentor- student relationship"

(NQN Interview Three)

The working relationship consequently left junior students feeling reassured and empowered to seek guidance from their senior peers when needed. This was highlighted by one student who reported feeling "*less embarrassed*" about making mistakes and less nervous about asking the senior student to "*show me the right techniques" (Junior Student Debrief Four).* However, this dynamic assumes that senior students possessed sufficient knowledge and experience at the time of the simulation to accurately demonstrate appropriate techniques. To explore this, all newly qualified nurses were asked during interviews whether they felt equipped with the necessary knowledge and experience to support their junior peers during the

simulation. They unanimously affirmed this readiness, exemplified by one NQN who stated:

"Yeah, At that time I think so. Yeah, definitely. If I was in second year, probably I wouldn't necessarily feel confident with certain things, but because I was at the end of my third year, I felt quite confident to show them like how to do things properly, or even like, give them advice"

(NQN interview Four)

Interestingly this NQN recognises their role in giving advice, but also suggests they were in a position to show the junior students how do things properly, reinforced by several senior students in the debriefs who mentioned the importance of ensuring evidence-based practice underpinned the care the junior students provided. One senior student commented:

"I think my role was just, um, supporting her understand or whatever that she was doing it was correct and there's evidence that supports everything that she's doing"

(Senior Student Debrief One)

Although this suggests that senior students were able to recognise the evidence underpinning the care provided, it must be acknowledged that qualified nurses in clinical practice possess significantly greater experience. This important distinction was raised with students when asked whether the difference in knowledge and experience between senior students and clinical supervisors was a cause for concern. While it was recognised that although senior students "*know a lot, they don't know everything*" *(Junior Student Debrief Two),* this did not appear to diminish the junior students' learning experience during the simulation, as illustrated by one junior student who stated:

"I don't think so. There was things like I'm asking questions and you didn't know the answer which is understandable where I think if it was a lecturer who was with me they would know so there are things but you don't expect them to know everything. You don't expect lecturers to know everything either though"

(Junior Student Debrief Two)

Alternatively, clinical staff experience was also considered, with two senior students in separate debriefs suggesting that older nurses often carry out procedures in ways they regard as the 'gold standard,' and that it is difficult to change the practice of nurses with over 15 years of experience. It was further proposed that students' learning experiences may therefore depend on the '*kind of professionals'* working in a particular clinical area *(Senior Student Debrief Two).* This contrasted with newly qualified staff, who one student suggested are more receptive to discussions about recent changes in practice. Furthermore, another student observed that some professional nurses actively ask students to demonstrate the correct techniques, indicating a reciprocal learning process. Indeed, when a first-year student was asked whether they felt more comfortable asking a third-year student rather than a lecturer or supervisor in practice, they responded affirmatively, stating it was 'because they have been in our situation.' This perspective was further explored by two first-year students:

"Because it was less time ago that they were in the same position as us so maybe I felt like, they understood. There's more understanding and more patience maybe. Like qualified nurses they are so busy and in a rush. So, you're kinda thinking 'Oh god I'm holding them up, whereas we kind of think like, they're still doing their training and they totally understand where I am"

(Junior Student Debrief Four)

"I think even on placements, we're not being supported by someone who has just completed uni or their training. I didn't know I would feel more comfortable as I know they understand me, the course now, how difficult it is, rather than your supervisor saying you should know that or you have to do that. So, I think I'd rather have a student in their third year supervising me as it just felt comfortable that way and I don't feel I'm going to be judged".

(Junior Student Debrief Three)

It could be argued that a clinical supervisor possesses the experience and knowledge necessary to answer questions and provide comprehensive support to students, whereas senior students are still in the process of developing their

knowledge base. However, junior students indicated they were less likely to question the knowledge of senior students because they perceived these peers as ‘doing similar things’ to themselves, while clinical placements often involved slightly different practices. This suggests that senior students retain the most recent skill set. Additionally, the use of the word ‘judged’ in this context is noteworthy, as it relates to the earlier discussion about assessment pressures. Several students associated the recent experience of senior students with a non-judgemental attitude, perceiving that since senior students have already progressed through the programme, ‘there is no judgement.’ Furthermore, the discussions revealed that first-year students felt senior students were able to empathise with their experiences, having themselves been in a similar position less than two years prior, as exemplified by one senior student

"It's that empathy element to it. We know the struggles they are going through. We sort of know how deadlines work. I know you can be on placement, and still have assignments to, and we also know what kind of level they should be at, or what kind of things we should be showing them for that particular time of the degree. I think it's just we are more up to date with what they are going through and what they need"

(Senior Student Debrief Two)

The response highlights that senior students are able to empathise with junior students due to their recent familiarity with the student experience, particularly regarding the workload and assignments students are required to complete. However, a NQN also raised an important point about recognising the appropriate level of the student, which subsequently influences the learning opportunities they are afforded in practice. This consideration is particularly pertinent in relation to the All Wales Practice Learning Framework (2022), which provides guidance on when students may undertake advanced clinical skills, such as catheterisation and medication management. This perspective was further elaborated by a NQN who stated:

“I think obviously they might feel overwhelmed, so you have to go slowly, you know. You have to make sure that the information taken is being absorbed, discussing important values for the nursing profession. So we didn't really

overwhelm them with so many information. We understand that they are first year, as I said earlier, they might not had previous care experience"

(NQN Interview Five)

This comment not only demonstrates an understanding of the learning process but also highlights the considered process they took when supporting the junior students, further informed by their own experience. To further develop understanding of the importance of empathy, NQN's were also asked whether, as a student they would have preferred to be supported in practice by a newly qualified nurse with recent experience of the programme, or a nurse with five years' experience:

NQN: Recent experience of the program.

Interviewer: Can you explain why?

NQN: Empathy, especially because things have changed so much in the pandemic, like you know, nurses that trained years ago have no clue what it was like.

(NQN Interview Three)

This NQN reflects on their experience of completing nursing training during the COVID-19 pandemic, which substantially limited their practical opportunities. However, they reinforce the idea that newly qualified nurses, having recently undergone training themselves, may be uniquely positioned to support students in ways that more experienced nurses might not. This suggests that the depth of a supervisor's knowledge may be secondary to the quality of the relationship and familiarity they establish with the student. Another NQN further discussed their experience within the simulation, specifically highlighting the nature of their working relationship with junior students:

"I think, yeah, like I touched on it earlier. I just think, because we were in their footsteps only two years prior so there is more of a connection. You know, I had mentors that have been nurses for like 20 years. So they were nurses, they were never students"

(NQN Interview Two)

This student again highlights the importance of a connection developed through empathy, grounded in an understanding of the junior student's current journey, further exemplified by one NQN who noted, "*we were wearing the same colour uniforms so there was an automatic connection*" *(NQN Interview Three).* Another NQN reflected on how empathy shaped their approach to supporting junior students, deliberately avoiding being overbearing or micromanaging, instead adopting a more relaxed style. One NQN suggested this relaxed approach helped junior students feel more "*serene with them*," thereby empowering them to ask questions they might otherwise feel too embarrassed to raise in clinical practice. This was reinforced by another NQN's observation that "*there's probably less camaraderie between a professional and a student" (NQN Interview Five),* implying that peer relationships are often driven by a shared goal and mutual understanding.

This theme has explored the role of the senior student as a mentor during simulation. Overwhelmingly, the discussion emphasised that junior students felt supported and valued the opportunity to work alongside their senior peers. In addition to feeling more confident in asking questions, students recognised the benefits of one-to-one support, which was further enhanced by the slower pace of the simulation-based environment. In contrast, in clinical settings, students reported feeling intimidated by the busyness of their mentors, which could negatively impact their learning experience and assessment outcomes. It is clear supervisors in practice face the difficult task of balancing the delivery of safe, effective patient care with providing adequate learning opportunities for students, a balance that becomes particularly challenging in acute and high-pressure environments. Within this theme, students also raised concerns about the attitudes and enthusiasm of supervisors in undertaking their mentoring role.

Interestingly, many participants considered empathy to be more central than the supervisor's knowledge, recognising the importance of mentors who understand the student's nursing journey and the challenges it entails. A key discussion point was also how the absence of formal assessment in simulation positively influenced students' experiences by alleviating their fears of being judged, which contrasts with their apprehensions in clinical practice.

4.4 Theme Three: The Learning Process

In response to the questionnaire question, “How do you think the simulation might affect your practice?”, seven students reported that the simulation enhanced their experience, which they believed would benefit them in future placement opportunities. This was exemplified by one junior student who stated, “*It will allow me to take more of a lead in patient discussions and has justified my perspective to spending more time with the patient*” *(Senior Student Questionnaire),* indicating a sense of affirmation and reassurance. Additionally, three senior students highlighted the simulation’s role in developing critical thinking skills, suggesting that it supports the acquisition of knowledge and facilitates the important process of linking theory to practice. However, before students can engage in critical thinking, they first need exposure to a range of experiences, such as understanding procedures like managing patient complaints:

“Um I have not had to deal with, I wouldn’t know how to deal with complaints and things so, it’s nice to sort of know what to do now because I wouldn’t have had a clue”

(Junior Student Debrief Four)

“I think it would be nice to do something more like this more often um especially as there were so many things I didn’t like I heard of Datix and I knew patients were allowed to complain obviously”

(Junior Student Debrief One)

Datix is a risk management system to collect and manage data on adverse events which could be a patient safety incident which could result in harm for the patient or indeed members of staff. In the simulation one of the scenarios required the students to complete a Datix due to the patient having their operation cancelled due to them not having correct blood work completed. This is something that students may have seen in any clinical environment; indeed, some junior students already knew how to report an incident using Datix possibly due to previous care experience, however, the simulation provided an opportunity to both reinforce and to apply the procedure

in practice. It is also important to note that although students may have had the same number of placements, their experiences will be different given the multi-dimensional nature of the clinical arena. This was clear with one student who suggested:

"Yeah I've never done that on a ward um I've never um never removed a cannula and there was some documentation I've never done before as well"

(Junior Student Debrief Two)

The student's experience was in contrast to other students who had undertaken this undertaken this procedure previously in practice, however the simulation provided an opportunity to practice this skill and to familiarise themselves with the documentation under the guidance of a senior student. Furthermore, students also reported that they were able to work out what the procedure would be and thereby discuss the next steps. This is clear with one junior student who reported:

"I became more active in thinking about the problem solving"

(Junior Student Debrief One)

Key for this student was the opportunity for discussion with the senior student who was guiding them, whereas in placement students may feel they may not have the time to discuss these aspects of care with their supervisor. As one student suggested, the simulation also made the students think for themselves whereas in placement 'normally the supervisor has the answer straight away' so they do not really have time to 'run it through their brain and make it register more'. This was also pertinent with one student who remarked:

"Looking at the bigger picture I think it's easy to focus on what we've been asked to do and to concentrate more, particularly with the last patient, Josephine, to think more holistically about why the patient is reacting the way she is and step back and think about it"

(Junior Student Debrief Four)

The idea of stepping back and spending time thinking suggests a reflective process, however other students also reported that the simulation supported reinforcement of understanding with one senior student suggesting they were able to 'step back' and watch someone else doing it which it reinforced the idea that 'I do know'. Furthermore, this reinforcement of knowledge led to students reporting a feeling of reassurance with one senior student reporting:

"It makes you think that you do know what you are doing, and like yeah you always think you know less than you do so maybe it did show actually I did know because all of the situations I've seen in practice, and if you were to go to those placements again, you probably would be able to do it more than you think you would. Yeah it was nice to think actually, you do know what you are doing."

(Senior Student Debrief One)

The concept of 'reinforcement of knowledge' was mentioned six times by different senior students during the debriefs, indicating that the simulation helped build their confidence by reaffirming their understanding of nursing practice through the scenarios. This was evident when one student admitted feeling they 'did awful' and questioned whether they deserved to be a third-year student; however, after reflecting during the debrief, they felt reassured that they had performed most tasks correctly. This not only highlights the crucial role of a structured debriefing process but also underscores its significant positive impact on students' confidence. Another senior student echoed this sentiment, stating:

"Thought it was good yeah. We were saying like it shows us how much you actually know because when you are out there, you still feel like you don't know anything, compared to your supervisor, but you compare now it actually puts you in a position where you have to think for yourself so it's nice to know that we do kind of know what we are doing"

(Senior Student Debrief Two)

This student also acknowledges that the simulation reaffirmed their level of knowledge, while highlighting the increased autonomy they experienced as a senior student, having to think independently. Acting as a guide or supervisor for the junior

student, they were in control of the situation without a direct supervisor to turn to for support, although a lecturer was available if needed. The senior student's role had thus evolved into one of leadership, as one student commented:

"I felt it was nice because normally on placement you don't normally get to take control"

(Senior Student Debrief One)

This was an interesting comment, especially considering that senior students are nearing the completion of their nursing training and will soon be working autonomously. Additionally, final-year students are expected to complete 'management proficiencies' during their final placement, where 'sign-off supervisors' confirm their competence in key tasks such as leading the care of a patient group and independently undertaking medication rounds on multiple occasions. Reflecting on this leadership role, a key theme emerged from the debriefs: the simulation's role in preparing students for supervisory responsibilities in practice, as one student commented:

"It's nice to see what sort of supervisor, what sort of supervisor I'm going to be. In a position where I'm going to ask questions and know that my student can feel comfortable asking me questions, I can answer them or I can't. I also liked being able to give first year a situation that I could maybe have done with, really benefitted from having something like this and feeling like I had that opportunity to ask all those questions in a situation that not going to have an impact on a real person and their care so it was good"

(Senior Student Debrief One)

When considering the students' comments, it is interesting to note that they not only internalised the experience by reflecting on the kind of supervisor they aspired to be but also contemplated their impact on future students, particularly ensuring those students would feel comfortable asking questions. It is evident that the students drew on their own experiences to shape their supervisory approach, thinking about what support they themselves would have benefited from. Interestingly, one student expressed enjoying the role of supervisor, stating they felt 'more in charge.'

However, there was also a strong and recurring desire among students to support their junior peers, with some commenting that they hoped they ‘were able to teach them’ or praising a peer by saying, ‘it was great how she was going, I wanted her to lead more.’ Conversely, one student admitted feeling initial concern about their future supervisory role:

“I think we worked together really well, I was scared about going into placement and having students, this is the first experience we’ve really had with working with someone else. It’s not as daunting as it seems”

(Senior Student Debrief Four)

Students across all debriefs recognised the significant impact a supervisor has on the learning experience of students at all levels, however it was clear that for senior students, their empathy towards their junior peers would strongly influence how they approach the supervisory role in the future. This was succinctly expressed by one senior student who stated the importance of always remembering how they felt as a first-year and making a conscious effort to be kind to students. Empathy was also highlighted in the questionnaire responses, with seven senior students commenting on the importance of supporting their peers, further illustrated by one participant who reflected, “*after listening to first-year students, I will aim to provide an environment where students feel comfortable and confident to ask me all manner of questions” (Senior Student Debrief One)*. Senior students who had role-played patients also reported developing empathy regarding the patient experience and the discomfort caused when nurses ‘stood over them,’ with one student stating, “*I felt frustrated anytime a student talked about me in front of me; I will endeavour not to do this in practice*.”

Furthermore, students emphasised the importance of being understanding and providing both general and personal support. Interestingly, when asked about their key takeaway from the simulation, one senior student suggested:

“Uh I’d say empathy and confidence. Empathise more with students. I think if I need to be supervisor once I qualify, I’m doing an alright job, better than some that

I've had before. And also, yeah feel more confident. Especially when you support people."

(Senior Student Debrief Three)

During the interviews, the NQN's were also asked to consider how the simulation might have prepared them for undertaking the role of supervisor in the future. Two NQN's suggested:

"I think it's empathy. It's that understanding of where you know the students have been. I want to remember my Uni days, you know, we all want to be nurses for good reason. Like I said I had great placement, but I know some students' did not have the best mentors, So yeah, just empathy"

(NQN Interview Three)

"I think Empathy, because, you know being a qualified nurse is hard enough but also having a student and teaching them to the level that they need to be taught at and give them the experience they need to be given. You know you have to adapt, every student is going to be different you've got to be able to adapt their ways. I know what they're going through, how they can learn how they can do it"

(NQN Interview Five)

The NMC guidelines (2023c) state that following 12 months post qualifying newly qualified staff can undertake this role following mentorship training, however, in practice the timing of the NQN becoming a supervisor is also dependant on their confidence and availability. Clearly from the comments above however, the senior student's report that their previous experience of the student journey may allow them to have a deeper understanding of what the student is going through which could subsequently positively affect the support they offer. One participant explains how she has already started supporting students, albeit not in a supervisory role:

"I know how they felt because I literally just stepped out of their shoes. I was like hi, welcoming them, because I know daunting it is like and I said I'm here to give advice and I gave them my cell phone number. I said I was new and I couldn't teach them anything, but I can give you advice. So I showed them around, told

them where to sit and where the sluice was. Then, by the end of their placement they came up to me and said, we've learnt more of you than we did from the actual nurses. I think it was more just like little tips I gave them, because you first placement is about fundamentals of care"

(Senior Student Debrief One)

This student discusses the benefits of their recent understanding of the programme when supporting students in practice, intimating that due to their recent experience they were able to advise the students more about the reality of placement, and what they perceived to be essential information. Although students receive an introduction to the clinical area during their first week, the NQN was sharing insider knowledge based on their own experience. In addition, it also reflects previous students' comments regarding empathy and the connection or trust students have with each other as suggested by one NQN:

"I think there's more that trust between students. We trust we trust each other. Let me tell you an example if I am jumping out of the conversion, you stop me. My first placement, first day or something a staff nurse asked me to do the observations. Unfortunately, I needed to practice more so I grab another student who was second year. I asked them to show me the NEWS because I felt confident to ask the student. You know I could trust the student; they were in their second year, so I felt relaxed asking the student"

(NQN Interview Five)

In this comment, observation refers to the recording of patient's vital signs such as; pulse, blood pressure and pulse. The NEWS the student refers to is the National Early Warning Score (NEWS) which is the document used to record the patients' vital signs and supports the detection of any patient deterioration. The comments also suggests that peer learning occurs in clinical practice and is a natural part of the learning process, with a junior student being supported by a more senior peer. However, for some NQN's the simulation was an opportunity to affirm their status as a senior student as one NQN suggests:

"I think it was valuable definitely for somebody who's not so confident in their self, having an opportunity to prove to myself"

(NQN Interview Four)

This was further supported by another NQN who suggested the simulation helped them realise they understood more than they initially thought, despite being only two months from completing the programme. Another student echoed this sentiment, commenting:

"So when you are in a position where you teach others, you're able to understand that you actually do know more than you think"

(NQN Interview Three)

This comment reinforces that the simulation served as a valuable learning opportunity for both junior and senior students. Throughout this theme, students at different stages of the nursing programme highlighted how the simulation allowed them to reinforce and reaffirm their knowledge and understanding. For junior students, the simulation provided exposure to various aspects of care and fostered reflection on their practice. For senior students, it offered preparation for their future supervisory role and an opportunity to assess and acknowledge their own knowledge levels. Moreover, this theme underscored the crucial role of empathy and the existing connection and trust between students, which further enhanced the learning experience.

4.5 Theme Four: Students Feelings and Confidence

Following the simulation, during the debrief, students reported a range of emotions and feelings. Many students stated they enjoyed the experience however, there were also students' who reported feeling stressed and exhausted with one student commenting:

"It was stressful. It was a weird situation because you knew it was simulation, but you had to get into like the mind-set of it being real so it was just trying to balance that really. But yeah, I think it was better the more the scenarios went on"

(Senior Student Debrief One)

This student makes an interesting observation about the importance of "*getting in the mindset*," highlighting that the success of the simulation as a learning experience heavily depends on the students' buy-in. The simulation-based space closely resembled a real clinical environment, complete with all the expected facilities, however, if a student is unable to fully engage and commit to learning within this simulation-based setting, their overall learning experience may be diminished. Interestingly, one student who described the simulation as stressful also acknowledged its benefits, as illustrated in the following extract:

Facilitator: How do you feel?

Participant: Stressed

Facilitator: Why do you feel stressed?

Participant: I don't know, it was just panicky

Facilitator: Why was it panicky?

Participant: Because I know they're not real patients

Facilitator: Ok, why did that make you feel panicky?

Participant: Um I feel it would be a lot different if it was an actual hospital environment and I don't know why

Facilitator: So you feel different because you know they are not patients?

Participant: and because I'm acting

Facilitator: So do you think there are benefits of practicing it this way first?

Participant: Yeah, I can mess up

(Senior Student Debrief Three)

One reason the student may have felt this way could be attributed to their unfamiliarity with SBE, as such activities had been removed from the curriculum due to the Covid-19 pandemic. Consequently, the simulation represented a dual new experience, not only were they supporting a junior student for the first time, but they were also engaging in SBE for the first time. Additionally, it could be argued that the senior students faced increased pressure, as they were expected to guide the junior students, answer questions, and promote best practice, which may have added further stress to the experience.

An area that both sets of students suggested they enjoyed was the opportunity to work together, with one senior student elaborating:

"In terms of like working together, that was good and we did, anything I didn't know we were like doing it together and it worked well"

(Senior Student Debrief One)

This collaboration was evidence during the simulation itself where students were clearly working in partnership, discussing aspects of care for each of the scenarios. In addition, students stated this further supported their confidence with one student reporting:

"I think it definitely builds confidence. When you haven't done it in a while you sort of forget certain things. Especially wounds cos they need to be kept clean because if you are doing it wrong then it's going to cause problems to the patient potentially so"

(Senior Student Debrief Four)

When considering all comments within the questionnaire, both junior and senior participants referenced *confidence* a total of 16 times, with many students suggesting that the simulation provided an opportunity to build or boost their confidence. An increase in confidence was also mentioned seven times during the debrief sessions, highlighting not only the value students place on confidence development but also the impact simulation had on their personal and professional growth. Several students were candid about their tendency to self-doubt, with one student stating:

"I think that is a massive thing, gaining the confidence to say to your patient 'I actually don't know, I'm going to go find out' that's really hard to do. And you feel that you are supposed to know it all"

(Senior Student Debrief Two)

Interestingly, students also reported increased confidence when working with the

multidisciplinary team (MDT), particularly the medical team. In one scenario, the students caring for a patient were prompted to contact a doctor to request a review; however, the scenario was scripted so that the doctor would initially refuse, stating they were too busy. When reflecting on this, one student commented, *"I wouldn't be happy doing it, but would be more inclined to do it now" (Junior Student Debrief Four),* which not only highlights increased confidence but also suggests personal development and a growing sense of professional assertiveness.

During the debrief there was also interesting discussion around the impact of the students' age on their confidence with several more mature students' reporting they have significantly changed as an individual due to life experience which has subsequently had a positive effect on their confidence levels. Indeed, one student reported they were not sure if they went back to their 18-year-old self they would have been 'more rattled' during the simulation. This was supported by another junior student who reported:

"I think you do get more confident as you get older and I think you become less concerned. I do still care what people think about me but not anywhere near I would have if I was like 18, 19, 20. I would have been much more self-conscious"

(Junior Student Debrief Four)

This junior student suggests that confidence may come with age, however one NQN during the interviews also suggested mature students typically may have already accrued considerable experience in the healthcare system undertaking roles such as health care assistants. As such, the NVQ suggested, mature students' life, and potential work experience enhanced their communication levels and 'made them more prepared' for the simulation. When considering the confidence of the junior students one NQN suggested:

"After the section they felt well, some of them told me that they felt much more confident to go to placement now, because they've learned something new, and they know that they won't feel like they don't know anything, I think it did help them a lot"

(NQN Interview Four)

Significantly, this NQN highlighted how the simulation positively impacted the junior students' confidence, suggesting they may feel more prepared for practice having learned something new. Moreover, another NQN proposed that working alongside their senior peers may have further enhanced their confidence, potentially "*opening their eyes*" and, following a period of reflection, helping them feel that they *"can make it"* and *"can deal with it."* However, another NQN acknowledged that the simulation experience may have had varying effects on students, depending on their individual personalities and prior experiences.

I think it all depends on the students, like some of them might walk away thinking, oh, I didn't know anything. I didn't know anything. Some of them will probably think like, It's fine, I'm only first year. I think it depends on the students, but I'd like to think that they know they're only first year and not expected to know everything. That's why we were there to help them so it shouldn't affect confidence.

(NQN Interview Four)

It could therefore be argued that students' levels of confidence are influenced both by individual characteristics and their specific experiences during the simulation. However, the NQN also suggested that junior students may have felt reassured by the presence and support of their senior peers, which may have positively influenced their confidence. In addition, the NQN raised a particularly important point regarding the expectations placed on students during the simulation, highlighting the need for clearly defined, realistic, and level-appropriate learning outcomes. Interestingly, one NQN noted that the junior students' self-confidence was initially a cause for concern:

"I felt a bit intimidated initially you know, because they might have very good self-confidence and they may know more than me"

(NQN Interview Five)

This statement highlights an interesting dynamic between the students, whereby the senior participant reflects on the possibility of being challenged by their junior peer. It could be argued that such an interaction has the potential to negatively impact the senior student's confidence, however, it may also serve as valuable preparation for

the realities of clinical practice, where newly qualified nurses are often challenged by patients, families, and colleagues. In contrast, other NQNs suggested that the simulation served as an endorsement of their knowledge and ability:

It made me understand that I was 100% ready to be to become a registered nurse

(NQN Interview One)

This was reinforced by another NQN who suggested:

It did make me more confident. I could imagine myself when I was doing the simulation; I thought to myself, this is what it will be like when I'm qualified. I will be having students and I will be having to point people in the right direction. You know, if you can't do it now in this simulation then good luck when you qualify. It helped me think yeah, you can do it.

(NQN Interview Three)

These two NQNs reflected on the simulation as a form of confirmation of their readiness to transition into the role of a registered nurse. Although the senior students were approaching the end of their programme, potentially having already completed their final assessments, the transition from student to qualified practitioner remains a well-documented and often challenging period. However, these reflections suggest that the simulation served to reaffirm their status and provided a timely boost in confidence to support the transition process. Notably, one NQN elaborated further, indicating that this increased confidence stemmed specifically from the experience of teaching and supporting others:

"So, when you are in a position where you teach and others, you're able to understand that you actually do know more than you think, and it gave me a little bit of confidence to think that I might be, I might be ready to be a newly qualified. So yeah"

(NQN Interview Five)

Another key observation from the debriefs was the evident motivation demonstrated by all students, not only in their willingness to share their own experiences, but also

in their eagerness to listen to, and learn from their peers. This sense of motivation extended beyond the formal structure of the simulation and was visible in the camaraderie developed among the students both during and in-between scenarios. During these informal moments, students frequently engaged in conversations about the simulation itself as well as their broader experiences as student nurses. This sense of shared purpose and mutual support was encapsulated by one student who commented:

"I think it was a mutual willingness to learn and willingness to teach. We know what situation we are in and what we want to achieve from this, it was nice!"

(Senior Student Debrief Four)

This was an interesting perspective, as the effectiveness of the simulation relied heavily on the engagement and commitment of both junior and senior students. If either group had not fully 'bought into' the simulation, their learning experience may have been compromised. Furthermore, given that the simulation was part of a research study and not an assessed component of their programme, it could have been assumed that student motivation and commitment to the activity might have been diminished.

This theme has explored students' feelings and levels of confidence following the simulation. Drawing on feedback from both debriefs and interviews, it is evident that collaboration and trust between students had a positive impact on the learning process. Confidence emerged as a key factor, particularly among junior students who reported feeling more assured when working alongside their senior peers. For senior students, the simulation provided an opportunity to consolidate their knowledge and fostered a sense of readiness for their forthcoming transition into the role of a qualified nurse.

Chapter 5: Discussion of Findings

5.1 Introduction

This section presents a synthesis of the key findings derived from the multiple data sources, including questionnaires, debriefs, and interviews. The analysis reveals how the peer-led simulation influenced professional socialisation among student nurses, highlighting the findings that reflect the complexity of the learning experience.

To organise the findings, three sub-headings were used, as depicted in Table 5 below. The first two sub-headings; optimal settings for optimal professional socialisation and the near-peer experience in simulation, directly reflect their corresponding themes. However, due to substantial overlap within the data and to promote clarity, the themes relating to the learning process and students' feelings and confidence were combined under the sub-heading developing the attributes of a professional nurse.

Table 5: Findings Sub-headings

Initial themes	Selected Themes	Findings
1. The Clinical Environment	1. The Simulation -Based Learning Environment	1. Optimal Settings for Optimal Professional Socialisation
2. The Simulation-Based Environment		
3. Role of the Supervisor in practice	2. The Role of the Peer Mentor	2. The Near Peer Experience in Simulation
4. Role of the 3rd Year Student as Mentor		
5. The Learning Process	3. The Learning Process	3. Developing the Attributes of a Professional Nurse
6. Students Feelings and Confidence	4. Students Feelings and Confidence	
7. Transition from Student to Nurse	Removed	

5.2 Optimal settings for optimal professional socialisation

Indisputably, the practical environment is a fundamental component of a nursing student's individual and professional development (Arkan et al, 2018), with Baraz et al (2015) describing it as an interactive network of forces that influence students' clinical learning. However, ongoing instability within the NHS has led to challenges relating to increasing workload pressures and a shortage of clinical placements (Jimenez et al, 2023). These challenges were further intensified during the Covid-19 pandemic, which significantly limited practice opportunities for students, resulting in many newly qualified graduates reporting feeling underprepared for the realities of clinical practice (Suplee et al, 2022). To address these issues, clinical replacement activities such as simulation are increasingly being implemented to supplement or substitute clinical practice hours (Jimenez et al, 2023) and are becoming a widely accepted alternative to direct clinical experience (Williams et al, 2022). This theme will explore students' feedback regarding the simulation-based learning environment, while also reflecting on their experiences and perceptions of the clinical setting.

When considering the students' experience of the simulation, the students reported the SBE as being a 'safe' environment where they felt nurtured, potentially enhanced by the pre-briefing activities, which are important to establishing a psychological safe environment, decreasing anxiety for students who undertake simulation (McDermott et al, 2021). The importance of psychological safety can be assigned to a 'just culture' where blame is not assigned but rather sympathetic good intent prevails (Johnson and Tan, 2021); hence, individuals perceive their environments at work to be supportive of interpersonally risky behaviours (Dieckmann et al, 2022) that reinforce a positive sense of community.

For students, a safe environment is therefore one where they are not ridiculed, or embarrassed by their mistakes, but instead use their mistakes and successes as learning opportunities (Ganley et al, 2012), which potentially improves their patient care and safety (Chaing and Liao, 2017). Evidence suggests within the clinical arena, lower psychological safety can act as a catalyst for patient errors (Hallmark et al, 2024), subsequently, given the current climate of healthcare as previously

discussed, enhancing psychological safety through SBE is an opportunity for students to enhance their self-compassion, lower their anxiety and positively impact their resilience (Kim et al, 2024). Furthermore, SBE provides students a learning environment where they are able to learn from their mistakes (HEIW, 2023), which may have had devastating consequences on patients in the clinical environment (Turner et al, 2018). Moreover, SBE also encourages students to process their feelings and emotions following potential stressful events through effective debriefing, thus promoting their psychological safety (Harder et al, 2021).

For the first year students this concept of psychological safety could be aligned unilateral dependence stage of Cohen's (1981) model of professional socialisation. During this stage students rely on the instruction of others and are likely to follow rules and are unlikely to challenge unsafe practice. However, through student feedback it suggests that junior students became more self-reflective and appeared to progress through Cohen's (1981) stages of professional socialisation. Consequently, psychological safety can be seen as a prerequisite for successful professional socialisation, as without the psychological safety the simulation provided, students may have remained in the dependence stage where any reluctance to advance their own learning by 'speaking up' can be detrimental to their own development and potentially to patient safety (Okuyama et al, 2014). Furthermore, through a safe environment Karnish and Shustack (2019) report that an interprofessional simulation can foster a sense of collaboration which can promote socialisation of students by improving professional role awareness and mutual respect.

Within the debriefs, students often referred to the culture of the simulation being positive whereas in the clinical environment it is often a significant factor which negatively affects their experience. The term culture is often used as a broad way to refer to the general customs or body of learned beliefs, which guides behaviours that are shared between a group (Orozco, 2012). Additionally, culture is crafted through interactions, communications, influences, and collaborations among members of a community (Duodu et al 2024). Within Weidman and DiAngelo's (2020) model the institutional culture and socialising influences contribute to the formation of a professional identity and dedication to the student's chosen profession.

Subsequently, SBE can act as a powerful tool within the institutional culture to enhance professional socialisation by providing realistic, immersive experiences that allow students to actively engage with their developing professional roles, navigate complex scenarios, and receive feedback in a safe environment. Within this culture, group behaviour manifests itself as values, habits of thinking, shared meanings, and workplace climate (Davis et al, 2016), which are all key to professional socialisation.

Nevertheless, while immersive ward simulations are effective methods used to support students to undertake the full responsibilities of a registered nurse (Jacob et al, 2022), it is recognised it cannot fully replicate the clinical environment and can be viewed as less challenging for students. However, for junior students SBE can act as an initial glimpse into the role of the nurse and reinforces both Cohen's (1981) and Benner's (1984) notion that professional socialisation is a progressive journey where students need to be introduced to the realities of the nursing role before entering the clinical environment. Moreover, when considering its role in professional socialisation, setting the climate for learning (Knowles, 1984) is also of great importance, as it involves both the physical and human interpersonal environment, where climate, mutual respect, collaboration, supportiveness, and openness need to be addressed (Quinn, 2013). Subsequently, the culture in the clinical settings has a major impact on what is seen as valuable in the return on investment in students, borne out in the clinical arena's openness philosophy (Hegenbarth et al, 2015), and pedagogical atmosphere.

The pedagogical atmosphere refers to the psychosocial climate of the clinical learning environment and plays a pivotal role in shaping students' educational experiences and professional identity (Warne et al, 2010; Papastravrou et al, 2016). A supportive and inclusive climate, where mistakes are accepted as part of learning, not only encourages competency development (Bianchi et al, 2016; Kajander-Unkuri et al, 2014) but also contributes to the professional socialisation process, whereby students internalise the values, behaviours, and norms of the healthcare profession (Weidman et al, 2010). In this context, the quality of supervisory relationships is crucial (Bos et al, 2015), as they model professional behaviours and set expectations that shape students' professional identity formation.

However, in a health care environment, this pedagogical atmosphere is often disrupted by fluctuating workloads, staff shortages, and systemic pressures (Gemuhay et al, 2019), which can hinder meaningful engagement with students. The resulting stress and depersonalisation (Leiter and Maslach, 2009) may lead to students feeling marginalised or burdensome, limiting their exposure to positive role models and reducing opportunities for reflective learning, key components of professional socialisation (Cohen, 1981).

In contrast, the simulation-based learning environment in this study offered a more stable and supportive space, free from the constraints of the clinical environment. Many students described the simulation as ‘comfortable,’ ‘relaxed,’ and even a ‘safe space’ for learning. This psychological safety enabled them to take risks, make decisions, and reflect on their performance without fear of negative judgement, conditions that support Cohen’s (1981) early stages of professional socialisation, particularly for first-year students in the unilateral dependence stage. At this stage, students rely heavily on guidance from others, and a non-threatening learning environment facilitates the gradual shift toward greater autonomy and self-reflection.

Moreover, simulations that replicate real-life clinical situations with simulated patients allow students to engage deeply in role-play, promoting not just clinical skills but also professional behaviours and communication strategies that are essential to socialisation (Ren et al, 2022). The realism of the scenarios and emotional engagement which were evident in students’ reported anxiety and frustration, indicates a high level of student buy-in which demonstrates involvement and engagement, which are also key core components that support professionalism (Weidman and DeAngelo, 2020). Subsequently, this immersive experience supports the internalisation of professional roles and expectations, particularly when debriefing and feedback are structured to encourage reflection on both technical and interpersonal aspects of care.

However, while some anxiety is expected and even beneficial for learning (Ganley, 2012), excessive stress may hinder performance and undermine self-efficacy (Bond, 2009), potentially disrupting identity formation. For junior students, this is especially relevant, as early exposure to complex environments without adequate support may

result in ‘reality shock’ (Christiansen and Bell, 2010), whereas simulations that strike a balance between challenge and support offer a safer entry point into professional norms and expectations, reinforcing both competence and confidence.

Furthermore, the impact of peer dynamics on stress and identity is diverse in the literature. While some studies suggest peer observation can increase anxiety (Paskins and Peile, 2010; Gormley and Murphy, 2023), peer coaching has also been shown to facilitate professional socialisation by modelling collaborative behaviours and reducing stress (McQuiston and Hanna, 2015; Markowski et al, 2020). In this study, students’ anxiety seemed more related to the realism of the simulation than peer relationships, suggesting that immersion in professional roles, even in simulation-based environments, plays a key role in shaping student’s evolving professional identity. Moreover, the positive feedback from students regarding their comfort in SBE and the opportunity to work closely with peers is significant. This aligns with findings from Visiers-Jimenez et al (2021), who report that student satisfaction with nursing education and self-assessed competence is closely associated with positive perceptions of the learning environment. When students perceive an atmosphere of care and support, they are more likely to internalise professional behaviours (Gonella et al, 2019) and become effectively socialised within a relaxed and supportive setting (Mafumo et al, 2022).

In contrast to the structured and supportive nature of simulation, students in clinical placements often reported feeling obliged to prioritise the operational demands of the clinical environment over their own learning needs, frequently due to staff shortages and time constraints, which can hinder both professional development and learning outcomes. Students consistently expressed a desire to be actively involved in nursing care and to be recognised as valued team members (D’Souza et al, 2015), hence a sense of belonging is widely acknowledged as essential for effective clinical learning (Levett-Jones and Lathlean, 2008), and forms a key component of the professional socialisation process.

Psychosocial and interpersonal factors, such as feeling welcomed and supported by staff, strongly influence student experiences and motivation (Flott and Linden, 2016). Furthermore, a workplace culture that values students and actively integrates them

into the team can enhance both placement satisfaction and professional identity development (Hegenbarth et al, 2015; Doyle et al, 2017). However, the variable quality of clinical placements, influenced by fluctuating workloads, can limit such opportunities. In contrast, simulation-based learning offers a valuable alternative by fostering a psychologically safe, inclusive, and learner-centred environment, where students feel supported to take risks and develop competence without fear of judgement (Goodare, 2015). These conditions are fundamental to the development of self-efficacy, a central element of Bandura's (1977) Social Learning Theory, where observation, modelling, and mastery experiences play a critical role in skill acquisition and confidence.

Furthermore, students in this study reported valuing the opportunity to take control in simulation scenarios, something often lacking in placement settings, where they may be relegated to passive observation. Alternatively, ward-based simulations, by enabling autonomous decision-making and hands-on practice, support the transition toward independent professional practice (Davies et al, 2022). Simulation not only enhances preparedness for graduate roles (Ragsdale et al, 2021) but also promotes equitable access to learning experiences (Bridge et al, 2022), helping to counteract the inconsistency and unpredictability of clinical placements.

Students also highlighted the ability to practice essential clinical skills such as ANTT, cannulation, or NG tube insertion, that they may not have encountered during placements due to limited exposure or being assigned to healthcare assistants, a common occurrence when registered nurses are unavailable, which can contribute to frustration and disillusionment, as previously noted by Thomas et al (2012a). In this context, simulation serves as a reliable and structured space for students to repeatedly practice and refine skills (Gutiérrez-Puertas et al, 2021), facilitating knowledge transfer and application to real-world clinical situations (Davies et al, 2021). From a theoretical perspective, these structured simulation environments align with Weidman et al.'s (2010) framework of professional socialisation, which emphasises the influence of institutional support, peer and faculty interactions, and role-based learning in shaping students' professional identity. By providing immersive, and inclusive experiences, simulation supports students' progression from passive observers to active participants in their own professional development.

However. when considering the acquisition and application of nursing skills, students in this study frequently commented on notable discrepancies between the techniques taught in SBE and those observed during clinical placements. For instance, students highlighted inconsistencies in aseptic technique during wound care and injection practices, with some clinical staff deviating from the standards emphasised in academic instruction, often attributed to evolving guidelines and the persistence of outdated or informal practices in clinical environments. This creates a dilemma for students, who may feel compelled to emulate suboptimal or outdated practices in order to gain acceptance within the clinical culture, even when these diverge from university-taught standards (Ousey and Gallagher, 2007).

This tension exemplifies the enduring ‘theory–practice gap’, a concept referring to the disjunction between theoretical instruction and its practical application, often viewed negatively due to its adverse impact on learner confidence, consistency, and competence (Greenway et al, 2019). Historically, nursing knowledge was predominantly transmitted and internalised through direct clinical experience (Falk et al, 2016), however, the shift to academic-based nurse education has resulted in the emergence of this gap, contributing to uncertainty and inconsistency in professional formation.

While theoretical insight is critical for encouraging reflective practice and rationalising decision-making (Saara, Kerthu, and Nuuyoma, 2019), students reported feeling discouraged, confused, or conflicted when faced with real-world practices that conflict with what they have learned academically. These experiences can produce a state of cognitive dissonance, where students feel torn between adhering to classroom-taught principles and conforming to local workplace norms (Steivy et al, 2015). Contributing factors include structural, pedagogical, and relational barriers (Factor et al, 2017), which collectively undermine the integration of theory into practice and can erode learner confidence.

This dissonance was particularly evident in students’ reflections on how routine ward activities limited their opportunities for growth and skill development, which aligns with research by Kerthu and Nuuyoma (2019), who reported that the task-oriented

nature of clinical care often fails to reflect the holistic, evidence-based approach promoted in academic settings. When students encounter varying standards of practice across different placements, this inconsistency can significantly impact their confidence and clarity regarding professional expectations (Houghton et al, 2013) which may lead students to question the necessity of adhering to core principles when qualified staff are not observed doing so.

This confusion can, on the one hand, undermine students' professional socialisation, as conflicting standards hinder identity formation and clarity of role (Mbalinda et al, 2024). Alternatively, it may serve as a critical developmental moment, prompting students to reflect on their values, build resilience, and begin constructing their own professional identity. In this sense, the theory–practice gap does not merely present a barrier, but also offers a space for active negotiation and identity development, an essential process in Cohen's (1981) and Weidman et al.'s (2010) models of professional socialisation.

While confusion can present an impasse that challenges students and causes difficulty (Lodge et al, 2018), it also has the potential to stimulate deeper learning as proposed by Madsgaard et al (2022) who argue that emotions such as confusion are integral to learning because they prompt exploration and critical engagement, encouraging students to seek clarity and meaning. Although commonly considered an emotional response, Tyng et al. (2017, p. 3) propose that confusion is better understood as a state of cognitive disequilibrium, arising when learners are confronted with contradictory information or competing schemas. In this light, confusion can support students in overcoming conceptual obstacles (Muller et al, 2007), particularly when educators create space for reflection and guided resolution. Supporting this, D'Mello et al (2014) found that confusion can be beneficial to learning outcomes if it is appropriately recognised and regulated. However, unresolved confusion can have the opposite effect, leading to frustration, disengagement, and diminished motivation. Subsequently, identifying moments when students are likely to experience confusion may enable educators to intervene more effectively with timely guidance and scaffolding (Nawaz et al, 2020).

While the importance of emotional support in learning is widely acknowledged (Mainhard et al, 2018), increasing student numbers and the limitations of traditional teaching formats can make it difficult for educators to detect and respond to individual emotional states, including confusion (Lodge et al, 2018). This presents a pedagogical challenge in health education: balancing the detection of emotional and cognitive barriers with the delivery of high-quality, evidence-based learning. This challenge is further compounded by the variability of clinical practices between placements and educators, resulting in confusion stemming not from their lack of competence in performing specific tasks, but rather conflicting professional standards.

Simulation-based education plays a valuable role in addressing this issue by providing a controlled environment for debriefing and reflection, which creates a platform for students to process and reconcile differences in practice, facilitating critical thinking and the development of professional judgement. One newly qualified nurse (NQN) in this study captured this idea, suggesting that witnessing different approaches helped them evaluate whether they should ‘simply follow’ what they saw or begin to formulate their own professional standards and decisions. Thus, simulation not only supports technical skill development but also fosters professional identity formation by encouraging students to critically evaluate practice and articulate their own values, essential components of the professional socialisation process (Weidman et al, 2010; Cohen, 1981). Recognising confusion as a natural and potentially constructive part of learning, particularly when paired with structured support and reflection, can therefore transform it from a barrier into a catalyst for deeper understanding and professional growth.

While junior students in this study expressed discomfort and concern over the inconsistencies between university-taught theory and clinical practice, senior students demonstrated a more pragmatic stance, recognising that adaptations in real-world settings do not necessarily reflect poor practice. This developmental progression aligns with Benner’s (1984) work, which highlights how students advance through experiential learning, become more capable of exercising professional judgment and accepting contextual variations in practice together with the nuanced realities of clinical environments.

This evolving capacity also reflects Bandura's Social Learning Theory (1977), particularly the concept of observational learning, wherein students internalise behaviours through modelling and vicarious experience. When role models deviate from evidence-based practice, students face cognitive dissonance, however, Bandura (1977) model proposes the later part of the learning process hinges not only on observation but also on self-efficacy. Subsequently, senior students had the belief in their ability to critically appraise and adopt appropriate behaviours despite conflicting influences, having built greater self-efficacy.

Moreover, this learning trajectory aligns with Weidman et al's (2010) model of professional socialisation, which emphasises how students are shaped not just by formal curriculum but also by the informal and hidden curricula within clinical environments. As students' progress, they are increasingly influenced by peer interactions, faculty guidance, and institutional culture, all of which contribute to their internalisation of professional norms and identity. Within this framework, the debriefing process becomes essential, not merely as a learning review, but as a space where students negotiate meaning, reflect on value-laden contradictions, and actively construct their professional identity. Subsequently, reflection during simulation debriefs supports more than just clinical competence; it fosters identity formation, critical thinking, and resilience. Moreover, it enables students to move from simply mimicking behaviours to evaluating and owning their professional practice, ultimately bridging the theory-practice gap in a psychologically safe and pedagogically rich environment.

Additionally, Schweller et al (2018) argue that in-depth debriefing, especially following emotionally complex simulation scenarios, is key in supporting professional identity development. In this study, students were encouraged to discuss disparities between simulation and real-world care as a group, which facilitated collective sense-making. Senior students contributed by sharing personal experiences, what Felton et al (2013) describe as a sign of professional socialisation, particularly when students apply insights from these reflections into clinical practice. Peer storytelling further supported identity formation in others, highlighting the communal and reflective nature of professional growth (Attenborough and Abbott, 2020).

The processes of reconstruction, re-contextualisation, and conceptualisation are integral to the sense-making function of debrief discourse, and hold significant transformative potential for professional identity (Kainth and Reedy, 2024), further enhanced through collaborative learning. Learning within a community not only strengthens interpersonal skills but also reinforces a shared professional culture, as argued by Lovell (2015). A growing body of evidence highlights how teamwork and peer engagement help shape and clarify students' understanding of their professional roles (MacKenzie, 2017; Hood et al, 2014), supporting a more resilient and socially integrated nursing identity.

Maslow's (1971) hierarchy of needs suggests that self-actualisation can only be achieved when individuals feel safe and secure. In this study, students indicated that simulation environments promoting friendliness and respect supported both their learning and psychological safety, critical foundations for effective professional socialisation. This aligns with Weidman et al's (2010) theory of professional socialisation, which posits that identity development in professional education is shaped by both formal instruction and informal experiences within educational and practice settings. The safe and structured nature of simulation provides a space where students can begin to internalise the values, norms, and behaviours of the nursing profession without fear of judgement or failure.

In contrast, the busyness and pressure of the clinical area often restricted meaningful learning opportunities (Houghton et al, 2013), creating tension between achieving proficiencies and delivering patient care. As newcomers, students must quickly integrate into complex clinical dynamics due to the limited duration of placements resulting in students in this study often feeling torn between demonstrating professionalism and asserting their own learning needs, illustrating a key challenge in early-stage professional socialisation.

Senior students reported being better able to balance these competing priorities, having become more accustomed to the clinical environment. Junior students, however, expressed uncertainty about how to negotiate this balance, often resorting to coping strategies such as 'playing the game,' where they conform to clinical norms and cultural expectations to gain acceptance and complete assessments (Chapman

and Orb, 2001). Furthermore, the concept of ‘playing the game’ also relates closely to belonging, as students attempt to embed themselves within the clinical team while managing differing expectations (Smith and Coleman, 2008) and avoiding actions that might ‘rock the boat’ (Stevenson et al, 2006, pg. 12). Students described needing time to assess the clinical culture before determining how to position themselves, a process that Weidman et al (2010) describe as a transition from anticipatory socialisation (where individuals imagine themselves in a professional role) to formal socialisation, where they actively begin to embody that role.

Conversely, students identified several positive aspects of simulation, particularly its psychologically safe and collaborative environment. SBE, when embedded within a respectful and inclusive culture was found to reduce anxiety while building confidence and self-concept (Goodare, 2015), which are essential factors to identity development and professional socialisation in nursing (Dias et al, 2024). Within the framework of Weidman et al (2020) simulation therefore serves as a formal curriculum element that explicitly supports the transmission of professional norms, ethics, and communication practices, allowing students to rehearse these behaviours in a controlled setting, promoting deeper internalisation and reflective engagement with the professional role. Furthermore, while students in this study acknowledged that negative clinical cultures could impact patient care and learning, simulation offered a distinct contrast. The environment fostered positive social dynamics, allowing students to engage as part of a team and safely practice professional behaviours, key to effective professional socialisation.

Nonetheless, it would be overly simplistic to claim that all simulation experiences are uniformly beneficial. As with clinical placements, students’ perceptions vary depending on prior experience, learning preferences, and contextual dynamics. However, the findings suggest that simulation offers more consistent opportunities to positively influence professional socialisation, especially when compared to unpredictable or unsupportive clinical environments. The formation of professional identity is an evolving and relational process shaped through experiential learning, reflection, and role modelling (Browne, 2018). This chapter highlights that both the simulation scenarios and, critically, the debriefing sessions provide essential learning spaces where students can develop professional values, navigate practice

discrepancies, and further develop their professional identity within a psychologically safe and pedagogically rich environment.

5.3 The Near Peer Experience in Simulation

The quality of the learning environment is crucial to effective learning, but it is the facilitator's role to cultivate an environment that nurtures and promotes professional growth. In clinical practice, mentors bear the responsibility of supporting students (NMC, 2023c), yet they often face challenges due to their dual roles as care providers and educators (Sculovici et al, 2023). Student nurses are typically positioned lower within the healthcare hierarchy, which can negatively influence their learning experience and professional socialisation (Mbalinda, 2014). In contrast, during the simulation, students in this study reported feeling empowered, particularly appreciating the collaborative nature of the experience and the personalised support provided, which further emphasised the positive impact of a supportive and individualised learning environment in facilitating effective professional socialisation and identity development.

The theme of benefiting from one-to-one support from peer mentors was frequently highlighted in student feedback, with many students expressing that they felt 'spoiled' by such a high level of individualised support. In contrast, during clinical placements, students often reported that the busyness of their mentors meant they were unable to work closely with them, which they perceived as a negative aspect of their experience. However, more pragmatic views were also expressed; some students acknowledged that the clinical environment was too hectic to ask questions, with one student emphasising that, regardless of the busyness, it was their responsibility to ask questions in order to improve and meet their proficiencies. Taking an alternative stance, one newly qualified nurse (NQN) suggested that "*time is not an excuse*" and that mentors should make an effort to work with students to identify learning opportunities, even if they are unable to provide one-to-one support due to their own busy schedules. This feedback aligns with the revised Standards for Student Supervision and Assessment (NMC, 2023c), which stress the importance of

obtaining feedback from a variety of staff members (Practice Supervisors) to inform the final assessment by the Practice Assessor.

While the simulation environment undoubtedly allows students to spend more time with their mentors, it could be argued that students' expectations regarding the busyness of the clinical environment need further exploration. Peer mentoring offers students more time and individualised attention for one-to-one interactions (Jacobson et al, 2022), a perspective echoed by newly qualified nurses (NQNs). They suggested that due to the busyness of mentors in clinical areas, students from different cohorts are often naturally drawn together, "*as they are on the same page*." Moreover, research by Cuesta-Martinez et al (2024) proposes that having someone who has been in the same position fosters a sense of calmness and security, providing opportunities for knowledge sharing. This peer support is a recognised benefit of students working together in clinical settings (Foster et al, 2015), further exemplified through the Collaborative Learning in Practice (CLiPP) model, which pairs students in practice to promote peer support and enhance learning (Hill et al, 2020).

These experiences reflect core elements of professional socialisation, which Weidman et al (2010) describe as the process through which students internalise the values, skills, norms, and identity of their profession. Near peer mentoring supports this by offering a social context for modelling professional behaviours, sharing tacit knowledge, and easing the transition from student to practitioner. Moreover, Cohen's (1981) theory of socialisation similarly emphasises that professional identity develops through interactive learning experiences, where novices gradually take on responsibilities within a community of practice, facilitated by more experienced members, in this case, senior peers.

Terry et al, (2020) also emphasises the importance of placing novice nurses near more experienced peers, arguing that successful communities of practice are built in supportive environments where students and new practitioners feel comfortable learning and engaging. Bandura's (1977) Social Learning Theory further explains that individuals learn behaviours, skills, and attitudes by observing and imitating others, especially when those role models are relatable and accessible, such as

senior student mentors or peers in simulations. As such, Flott et al (2022), suggests a one-to-one, peer-to-peer mentorship approach offers significant benefits for mentees, including personalised attention and opportunities for novices to ask questions about their nursing programme, coursework, and assignments (Dennison, 2010). Additionally, the simulation also provided a clear focus for the peer mentor, whose primary role was to support the junior peer during scenarios, while in clinical practice, a mentor's main responsibility is ensuring safe and effective care (Courtney-Pratt et al, 2015). Subsequently, in practice, while some supervisors view students as an additional resource, others see them as a burden (Bos et al, 2015), which can influence mentors' willingness to take on mentoring roles (Foster et al, 2015).

It is however important to acknowledge that clinical mentors possess significantly more experience and knowledge than senior student mentors; nevertheless, junior students recognised the value of near peer led simulation, even while understanding that senior students did not have all the answers. During debrief sessions, many reported feeling more confident in their own knowledge when guided by senior peers who applied evidence-based practices aligned with the curriculum. In contrast, clinical placements sometimes introduced variability in practice, which could lead to uncertainty, as previously discussed. Senior students helped to contextualise these experiences by bridging the gap between simulation and real-world clinical environments, where procedural differences may occur, aligning with findings by Zentz et al (2014), who observed that junior students often saw senior peers as possessing the knowledge of a professional combined with a relatable understanding of the student role.

Consequently, transitioning some mentorship responsibilities from registered practitioners to senior students does not appear to impede junior students' grasp of essential nursing concepts (Valler-Jones, 2014). This perspective is further supported by newly qualified nurses (NQNs) interviewed in this study, who expressed confidence in their ability to support junior students during their final year. However, it is noted that peer mentors may sometimes struggle to break down complex procedures into simpler explanations (Henderson et al, 2020). Despite this, research by Dumas et al (2015) demonstrated that junior students rated their

simulation experiences across performance, assessment, and satisfaction as equally effective when led by senior student instructors compared to faculty. Moreover, similar to practicing nurses, peer mentors are not expected to have all the answers; instead, they model an important professional behaviour: seeking out appropriate resources to find evidence-based answers, which reflects a key aspect of the nursing profession, that evidence-seeking and lifelong learning are integral to safe and effective practice (Dennison, 2010).

Moreover, within the peer-led simulation environment, students reported feeling less embarrassed about shadowing their peer mentors and more comfortable asking questions, which suggests that peer simulation can foster a greater sense of autonomy, allowing students to take more control over their learning (Stone et al, 2013). However, it is important to acknowledge the structured and controlled nature of the simulation environment, where students care for individual patients without the interruptions, competing demands, or time pressures inherent in real clinical settings. Additionally, the level of autonomy mentors provide in clinical practice depends on the student's experience and level, guided by assessment documentation that supports progression along the novice-to-expert continuum as suggested by Benner (1984).

The positive peer relationships and greater comfort observed in simulation reflect Weidman's (2010) professional socialisation theory, which emphasises how students internalise professional roles through participatory experiences within a community of practice. By shadowing senior peers in a supportive environment, junior students observe and adopt the behaviours, language, and attitudes of the nursing profession in a way that feels safe and non-judgmental, facilitating identity formation. Similarly, Cohen's (1981) socialisation framework highlights that professional identity develops through interactions where novices gradually take on responsibilities under the guidance of more experienced members, aligning with students' experiences of peer mentoring in simulation.

Students in this study also reported positive interpersonal relationships between junior and senior students during simulation activities. In contrast, their reflections on clinical mentorship were more varied. One third-year student described a mentor as

"*very intimidating*," highlighting how negative mentor-mentee dynamics can hinder student development. Conversely, another student praised a mentor for inspiring her to "*be the change she wants to see*," demonstrating the powerful impact of supportive mentorship. These contrasting experiences suggest that while simulation environments often foster constructive peer relationships, clinical practice dynamics are less predictable and heavily influenced by individual mentor styles.

Bandura's (1977) Social Learning Theory further explains these findings, proposing that individuals learn not only through direct experience but also by observing others, especially relatable role models. The relaxed and approachable nature of senior students in simulation creates ideal conditions for observational learning, allowing junior students to model professional behaviours with less fear of judgment than might occur in clinical settings. This supports the development of self-efficacy, a core concept in Bandura's theory, where confidence in one's capabilities grows through successful vicarious learning experiences.

Furthermore, the mentor-student relationship is pivotal, as it can significantly influence professional development, both positively and negatively (Baxter and McGowen, 2022). Tuomikoski et al (2020) similarly emphasise that interactive and engaging mentor-student relationships form the foundation of effective learning and contribute positively to professional identity formation. Harrison-White and Owens (2018) describe mentors as gatekeepers who determine whether students feel accepted within the clinical setting. If this relationship is strained or diminished, students may face reduced learning opportunities, hindering their development.

In contrast, a recurring theme from simulation debriefs was that junior students found senior peers to be more relaxed and approachable, attributed to senior students' recent experience of similar academic and clinical challenges. This sense of connection aligns with Cuesta-Martinez et al (2024), who found that peer mentoring fosters natural and open communication, promoting camaraderie, symbolically reinforced, as one newly qualified nurse (NQN) noted, by their shared uniform colour. Another NQN highlighted that while mentors' clinical experience was valuable, senior students' recent and relatable understanding of the programme

made their support more impactful, remarking that "*mentors don't have a clue what* it's like."

As such, the support offered by senior students was deeply informed by their own recent experiences, highlighting the significance of empathy in peer relationships (Zentz et al, 2014). Senior students ability to empathise, having only recently navigated similar challenges, enabled them to provide reassurance and guidance that felt more relevant and relatable to junior students underscoring the importance of trust in the mentor-mentee relationship (Christiansen and Bell, 2010) and the need for clinicians to acknowledge and respond sensitively to students vulnerability (Chan, 2001). This aligns with Bennett et al (2015), who argue that individuals who have recently undergone comparable transitions are often best positioned to offer perspectives and support that resonate deeply with newer learners.

Furthermore, the recognition of senior students as peers on the same educational journey reinforced their role as powerful and legitimate role models, serving as sources of reassurance (Christiansen and Bell, 2010). This dynamic is explained by Bandura's (1977) Social Learning Theory, which posits that junior students learn effectively by observing and modelling the behaviours of relatable role models. Through this observational learning, junior students pay close attention to their senior peers' attitudes and actions, internalising professional behaviours in a supportive context. Moreover, peer mentees reported valuing the interpersonal relationships they developed with their senior student mentors which fostered a sense of community and mutual respect, grounded in shared experiences and an understanding of the challenges faced by first-year students, both academically and during clinical placements (Jacobson et al, 2022). In contrast, this level of emotional connection and empathy is not always prioritised in traditional clinical mentorship, where time constraints and hierarchical structures may hinder the formation of supportive relationships.

Conversely, mentors in clinical practice often face significant emotional and psychological pressures during the assessment process, particularly in final placements where they must determine whether a student passes the practical component of the programme, which North et al (2019) categorise as a form of

professional strain. While failing to accurately assess a student's performance breaches ethical responsibility and professional credibility (Hughes et al, 2021), mentors may still struggle with the emotional burden of negatively assessing students who are eager to progress.

In this study, additional barriers to effective assessment emerged, with both junior and senior students expressing reluctance to ask mentors questions, often due to embarrassment, perceived expectations that they should already know, and negative mentor attitudes. These findings align with Christiansen and Bell (2010), who report that students frequently feel anxious and inadequate during initial clinical experiences. This anxiety can intensify when questions are asked in front of patients, which has been shown to diminish student confidence and negatively impact their rapport with patients (Rohatinsky et al, 2020). Arkan et al (2018) also suggest that students often perceive instructors as overly focused on identifying deficiencies and holding elevated expectations, contributing to emotional exhaustion and decreased motivation, an experience that contrasts sharply with the positive feedback from simulation environments.

From a professional socialisation perspective, Cohen's (1981) theory helps explain these emotional challenges as part of the complex process through which students internalise professional norms and expectations. The anxiety and reluctance to ask questions reflect the tension students experience as they navigate their emerging professional identities within clinical settings that may feel judgmental or hierarchical. Similarly, Weidman's (2010) model emphasises that socialisation involves both learning the explicit skills and knowledge of the profession and managing the emotional and interpersonal dynamics of becoming a professional. Mentors' attitudes and behaviours play a critical role in shaping whether students feel supported or vulnerable during this formative process.

The pressure to succeed in clinical assessments remains a significant source of stress for nursing students. In contrast, the absence of judgment from senior students during peer-led simulations contributed to an environment that alleviated the 'sense of panic' often felt when students fear saying the wrong thing. Without the burden of formal assessment, these settings foster psychological safety (Lilliekroken

et al, 2024), allowing students to feel safe to fail and free to make mistakes without needing to remain constantly on guard. This perceived safety and acceptance creates a more relaxed and supportive learning environment, which can be instrumental in reducing anxiety, particularly situational anxiety associated with high-stakes clinical scenarios (Kachaturoff et al, 2020).

However, earlier research by Valler-Jones (2014) reports that some junior students in peer-led simulations can still experience anxiety due to fear of judgment from peers. Providing negative feedback in such settings is often problematic (Bennett et al, 2015), as students may feel uncomfortable adopting a position of power over their peers (Ladyshewsky, 2010). This suggests that feedback in peer learning should aim to support reframing of knowledge and meaning, rather than being purely evaluative. Maynard (2012) emphasises the importance of adopting a coaching approach, one that motivates and guides learners through effective feedback instead of criticism.

Additionally, students reported experiencing support, empathy, enhanced learning, and reduced anxiety, key elements in effective professional socialisation. Junior students, in particular, highlighted the benefits of receiving academic advice from their peers, echoing findings by Roberts (2008), who noted that students often act as resources for one another, sharing “survival skills” and collaboratively navigating the journey of becoming a nurse. It was evident that junior peers viewed senior students as effective role models, as also reported by Irvine et al, (2018), suggesting that the peer learning experience was invaluable for the development of professional identity. Mentors are instrumental in guiding students through professional socialisation and aiding the formation of professional identity (Brathwaite and Lemonde, 2011). However as Cohen’s (1981) socialisation model explains, students acquire both the formal knowledge and the subtle norms, values, and behaviours necessary to become accepted professionals, while Weidman’s (2010) model highlights the emotional and relational dimensions of this transition, emphasising peer and mentor influences as critical socialising agents. Houghton et al, (2013) suggests that peer collaboration significantly impacts this process, as social support from peers reduces stress and enhances learning, both prominent themes in student feedback.

Bandura's (1977) social learning theory further clarifies how junior students learn through observation and imitation of senior peers, who serve as powerful, relatable role models. The process of modelling behaviour, attitudes, and coping strategies within this peer environment fosters professional growth in a way that complements the formal curriculum. Additionally, Benner's (1984) novice-to-expert framework aligns with these findings, as senior students occupy an intermediate stage, bridging theoretical knowledge and practical expertise, and are uniquely positioned to guide juniors through stages of skill acquisition and increasing autonomy.

Moreover, there was a clear solidarity among students, built on their emerging professional identities as student nurses with senior students helping their junior peers make sense of their experiences, contributing to identity development (van Dyk et al, 2022). Furthermore, Bennett et al (2015) highlight that engagement with senior professionals offers benefits beyond clinical knowledge, fostering recognition and belonging within the clinical team, essential components for professional identity. Supporting this, junior students described feeling empowered, enhancing motivation, morale, performance, and job satisfaction, which Lu et al (2019) link to stronger professional identity and improved patient care. Cust (2018) similarly found that students' sense of belonging and confidence lays a solid foundation for ongoing professional development. Senior students, having recently navigated similar challenges, balanced providing guidance with promoting autonomy, encouraging juniors to learn through trial and error. Flott et al (2022) note that such experiential learning is vital for independent growth and is integral to professional socialisation, echoing Benner's (1984) emphasis on progressing from novice to expert.

5.4 Developing the Attributes of a Professional Nurse

Although all students have the same number of placements, their experiences differ due to the multidimensional and variable nature of the clinical environment. To promote equity, simulation is proposed as a transformative tool in higher education to enhance students' critical thinking and psychomotor skills (Stroup, 2014), positively influencing confidence and preparedness (Rutherford-Hemming, 2012). This theme explores student feedback regarding personal and professional

development, including confidence, critical thinking, and empathy that contribute to the ongoing process of professional socialisation.

Students reported gaining new knowledge and applying it practically, such as using complaint procedures and removing cannulas. Importantly, they stated they also became more active problem solvers, engaging with scenarios independently rather than relying solely on mentors for answers. This aligns with the literature noting simulation's benefits in improving judgment and problem-solving (Lee and Ji, 2024), as well as enhancing analytical decision-making (Abdulmohdi and McVicar, 2022). Additionally, encouraging students to move beyond their comfort zones stimulates problem solving and knowledge development (Hodges, 2011), which in turn improves self-efficacy and learner satisfaction (Ma and Kang, 2023).

Critical thinking development, highlighted in this study, is a fundamental component of professional identity formation (Douglass et al, 2024). As healthcare roles evolve, skills such as critical thinking, problem-solving, and decision-making become essential for quality care and often prompt transformation of existing professional identities (Rasmussen et al, 2021). The reflective processes observed during and after the simulations reflect Weidman's (2010) emphasis on re-socialisation, where learners reframe their understanding through reflection and social interaction, which are part of the socialisation process.

Moreover, senior students' role in assisting juniors during debriefs supports Cohen's (1981) notion that socialisation involves acquiring not only technical skills but also the norms and values of the profession through interaction with more experienced peers. Research by Kostovich et al, (2013) supports this, showing students increasingly value teamwork as a resource for critical thinking and patient care, while Benner's (1984) novice-to-expert model further contextualises this progression; as students move from reliance on rules and guidance towards fluid clinical reasoning and autonomous problem-solving.

Professional socialisation, therefore, extends beyond technical competencies to include cultivating critical thinking necessary for effective clinical reasoning (Ajjawi and Higgs, 2008). This cognitive development is fostered in both mentors and

mentees through peer learning interactions and structured reflection (Loke and Chow, 2007). Conversely, inadequate socialisation impedes this growth, with Dinmohammadi et al (2013) identifying poor critical thinking as a major negative consequence. Hence, structured debriefing emerges as an essential simulation component, providing space for critical reflection and consolidation of learning.

Within education the opportunity to ask questions, especially in non-threatening environments as reported in this study, is crucial for developing problem-solving skills (Dkeidek, Mamlok-Naaman, and Hofstein, 2011). This study's findings reinforce that nursing students need safe spaces to inquire and explore so that they can deepen their nursing identity, gaining richer understanding of what it means to be a nurse, consistent with Walker et al (2015). Moreover, Parker and Myrick (2010) further describe reflection as both content analysis and process reflection, integral to re-contextualisation a key phase in Weidman's (2010) socialisation model. Thus, debriefing not only refines scenario-specific problem-solving but also contributes meaningfully to professional socialisation by fostering critical reflection, collaboration, and identity development.

Another key contribution to the socialisation process was the time provided for students within the simulation, which students in this study identified as 'time to think things through' and 'think for themselves.' This opportunity to reflect independently aligns with Weidman's (2010) model of professional socialisation, where individuals internalise professional roles through cognitive and affective engagement. As such, the simulation not only supported reflective practice but also provided autonomy, with one student noting it was "*nice to take control*" , which reflects Bandura's (1977) theory of self-efficacy, where mastery experiences enhance belief in one's capabilities, mediating the relationship between knowledge and performance (Cengiz et al, 2023). The debriefing process further reinforced this effect by allowing students to reconsider scenarios, which Kim et al (2019) report as boosting confidence in clinical decision-making and problem-solving.

During simulation, students also demonstrated a strong sense of camaraderie, sharing experiences and displaying mutual motivation to learn and teach. This peer interaction reflects Cohen's (1981) emphasis on the social aspects of professional

socialisation, where learning occurs through relationships within a community of practice. The motivation of supervisors and the culture of the clinical environment deeply affect learning opportunities, shaped by power dynamics and mentor relationships (Ganley, 2012; Nordquist, 2019). As such, this can negatively affect student's desire for support and inclusion rather than isolation, which directly impacts their socialisation and learning.

Moreover, it was clear in both the simulation and debriefs that students were motivated to learn, support and contribute. Motivation is central to human behaviour and learning (Diaz-Agea et al, 2021), described as an internal drive toward goal achievement, with Rogers (2001) asserting that motivation is a prerequisite for learning. Intrinsic motivation, driven by personal interest or moral significance is particularly effective (Li et al, 2020), consistent with Knowles et al (2011) andragogical principles that adult learners are self-directed and ready to learn topics relevant to their lives. Additionally, Diaz-Agea et al. (2021) propose that simulation environments that cultivate a climate of trust that can significantly increase student motivation. Supporting this, Dennis et al (2020) found student-led simulation-based learning (SBL) enhances motivation more than faculty-led SBL, while Han et al (2016) argue that facilitator autonomy fosters student-centred approaches, which further boosts motivation in senior students. Moreover, there is strong evidence that SBE promotes self-directed learning and self-efficacy (Oh et al, 2015; Kim, and De Gagne, 2018), critical to professional socialisation as students gain confidence and autonomy, key elements emphasised in Bandura's (1977) social cognitive theory.

However, the success of simulation depends heavily on students' engagement and buy-in (Anderson and Watkins, 2018). When students understand the simulation's purpose and feel supported, motivation flourishes, while inadequate support in unfamiliar or stressful situations can reduce engagement (Patton, 2014). As such, well-supported simulations can enhance critical thinking and motivation, helping students bridge the theory-practice gap, which is essential for socialisation into the nursing profession (Fawaz et al 2016).

Moreover, effective collaboration and mutual understanding between participants are essential components of peer learning in simulation-based education, as highlighted

in this study. However, achieving such collaboration requires a sense of equality in status, active cooperation between students and faculty, and the fostering of positive, shared expectations (Leathard, 2009). Within this context, the concept of professional agency is critical to understanding each student's position and the driving forces behind their decision-making and willingness to collaborate.

Professional agency, widely explored in workplace and professional learning research (Eteläpelto et al, 2013), is defined as the capacity of professionals to act reflectively and purposefully within their environment (Rogers and Wetzel, 2013). This capacity enables students not only to engage with learning but also to shape their own professional development actively, a key element in Weidman's (2010) professional socialisation model, which emphasises the learner's active role in internalising professional roles and responsibilities.

Furthermore, professional agency extends beyond students to educators and facilitators, who possess the autonomy and influence to shape educational experiences. Dewey (1995) identifies two key elements of professional agency particularly relevant to simulation-based education: first, facilitators must establish an organic connection between educational content and students' prior experiences; second, impactful learning experiences should influence students' future actions and understanding. This reflects Bandura's (1977) social cognitive theory, where learning is situated in a reciprocal interaction between individuals and their environment.

When students perceive that what they are learning has relevance and impact on their future clinical practice, they are more likely to engage meaningfully with the experience. These insights highlight the challenge for facilitators in simulation-based education: designing learning environments that both draw on students' past experiences and support their future professional development. Therefore, effective scenario design is vital, as it enables meaningful learning aligned with clearly defined educational objectives, which have the potential to enhance students' learning and confidence, ultimately contributing to their professional growth and socialisation into the nursing profession (Huffman et al, 2016).

Additionally, both students and newly qualified nurses (NQNs) reported increased confidence, suggesting that peer-led simulation positively impacted their personal and professional growth. The positive influence of simulation on participants' confidence is well supported in the literature (Luna and Behan, 2014; Olaussen et al, 2020; Dawood et al, 2024), however simulation has also been shown to enhance students' confidence in clinical judgment and decision-making (Weeks et al, 2024), as well as in areas such as collaboration and prioritisation (Nowell, 2017). Valler-Jones (2014) reports that students felt more confident managing similar clinical situations during placements following simulation, a sentiment echoed by one NQN in this study who suggested the experience would help junior students feel more prepared because they had "learnt something new."

Student feedback on increased confidence is echoed in Wareing et al's (2018) research, which found confidence to be the strongest theme emerging from focus groups after a coaching and peer-assisted learning pilot, particularly in supporting professional identity construction among mental health nursing students. Confidence development is closely linked to effective mentoring (Gazaway et al, 2019) and peer support (Green, 2018), both contributing significantly to students' personal and professional growth. Furthermore, team support and a sense of belonging positively impact confidence (Hunter and Cook, 2018), enhancing the process of professional socialisation, facilitating progression along the professional socialisation journey (Jackson and Steven, 2021). Thus, confidence, alongside a strong sense of belonging, is essential in shaping nursing students' professional identity, and may itself be a marker of successful professional socialisation (Dinmohammadi et al, 2013).

Another key theme from the feedback was empathy, with students reporting a deeper understanding of placement challenges and the importance of sharing experience-based information. Peer learning among nursing students fosters this empathetic exchange, as students often feel more comfortable sharing thoughts and feelings with peers than with academic staff (McKenna and French, 2011). Consequently, students are more receptive to information from peers who have recently navigated similar experiences, which can further enhance confidence (Stone et al, 2013; Cust, 2018). Central to these peer relationships is the emotional support

offered, contributing to feelings of calm and security (Carey et al, 2016a), as well as academic assistance (Cuesta-Martínez et al, 2024). This emotional support, grounded in empathy and friendship (Christiansen and Bell, 2010), helps reduce student stress (Kachaturoff et al, 2020).

For senior students, the study revealed multiple professional development benefits that align with established theoretical frameworks. Having progressed through earlier stages of the nursing program, senior students demonstrated awareness of the challenges faced by their junior peers and found reassurance in their own accumulated knowledge. This reflects Weidman's (2010) theory of professional socialisation, where students internalise the norms, values, and skills of the profession through active participation and reflection on their experiences. Comparing their current competencies to those of juniors helped reinforce their readiness for professional practice, consistent with Benner's (1984) model of skill acquisition from novice to expert, as seniors move toward more advanced stages of clinical competence. One newly qualified nurse (NQN) noted the experience made them feel well-prepared for registration, reinforcing their progression along Benner's continuum.

Smith et al (2015) support this view, showing that peer mentoring allows students to evaluate and validate their nursing knowledge by teaching others, which Bandura's (1977) social learning theory explains through observational learning and self-efficacy development. Anderson and Watkins (2018) further report that peer mentoring supports students in recognising their growth since novice stages with Bright (2019) identifying additional benefits of peer mentoring, including enhanced communication, collaboration, and decision-making skills. A key source of reassurance for students was their role as peer mentors, where teaching junior peers helped them realise their deeper understanding, which involves metacognition and reflective practice, critical components in Cohen's (1981) theory of peer learning and identity development. This reflection and simplification of skills require engagement with prior knowledge (Christiansen and Bell, 2010), promoting both cognitive and affective growth.

The Covid-19 pandemic introduced barriers to psychosocial and identity development for many senior students, particularly reducing access to face-to-face learning and simulation experiences (Rode et al, 2023). Nevertheless, while peer learning is widely recognised for supporting the professional identity formation of junior students, it also plays a significant role in shaping senior students' identities as emerging leaders (Burgess and Nestel, 2014). This study suggests peer mentorship facilitates teaching and leadership skill development as recognised by Cuesta-Martínez et al, (2024), supports mutual learning between mentor and mentee (Lilliekroken et al, 2024), and positively influences future clinical performance (Williams and Reddy, 2016). These findings parallel medical education research where peer-assisted learning fosters professional identity by positioning senior students as assessors and feedback providers (Burgess and Nestel, 2014).

Participants also reported feeling better prepared for the challenges of registration and professional practice following simulation, which often challenges personal and professional identities (El Hussein, 2023). This readiness can be understood through Weidman's (2010) framework of professional socialisation, whereby transformative experiences foster identity development. Glazzard et al (2021) highlight that peer mentorship can lead to identity transformation, where senior peers see themselves as future workforce leaders, a process aligning with Benner's (1984) progression model and Cohen's (1981) social identity theory. Similarly, Andre et al (2017) propose that peer mentorship enhances leadership skills and career prospects. Therefore, peer mentoring programmes can be effective in supporting nursing students' leadership development and practical experience acquisition (Bright, 2019), fostering a heightened sense of readiness for registration and professional practice (Christiansen and Bell, 2010).

Chapter 6: Conclusion and Implications for Practice

6.1 Introduction

The primary aim of the research was to investigate the effect of peer learning through simulation-based activities on the development of adult nursing students' professional socialisation. To achieve this I used the following research questions:

- How do simulation-based activities contribute to the professional socialisation of nursing students?
- What is the contribution of the senior students to the professional socialisation of the junior students in such simulation-based activities?
- What are the benefits and drawbacks for senior students when supporting junior students in simulation-based activities?

To answer these questions I have used a range of data collection methods including questionnaires, debriefs and interviews, with junior and senior students as well as the senior peers who had since the time of the simulation had been qualified for six months.

This chapter aims to summarise the key points and findings of the research with an aim of discussing its implications for future research, policy and practice. The key function of this concluding chapter is to clearly answer the research questions in full (Trowler, 2023), as such, the structure of the chapter will be guided by the research questions followed by implications and recommendations for practice, and suggestions for future research.

6.2 Research Question 1: The Simulation-Based Arena

Does simulation-based education contribute to student's professional socialisation?

This study highlights the vital and multifaceted role of simulation-based education in supporting nursing students' professional development, socialisation, and readiness

for clinical practice. As healthcare education faces challenges such as limited placements, increasing student cohorts, and variability in practice environments, simulation provides a consistent, learner-centred, and pedagogically rich alternative, creating a psychologically safe space where students can practise skills, make mistakes without fear, and crucially reflect, which are key for effective professional socialisation.

The findings affirm that SBE plays a pivotal role in professional identity formation, aligning closely with Weidman et al's (2020) model which proposes that socialisation can occur through formal instruction, informal peer interaction, and professional role modelling. SBE supports all three elements, enabling students to internalise nursing values and norms through structured scenarios, faculty guidance, and peer collaboration. Moreover, the immersive nature of simulation encourages students to act, think and be like a nurse (Roberts and Greene 2011), which has the potential to encourage the early adoption of professional roles, accelerating the socialisation process.

Additionally, the progression observed in students' thinking and practice aligns with Benner's (1984) 'novice to expert' framework. Simulation helps students move from rule-based thinking typical of novices toward more intuitive, context-sensitive understanding seen in advanced beginners and competent practitioners. Through repeated exposure to complex scenarios and structured debriefing, students develop clinical reasoning and judgement in a risk-free environment, which mirrors the experiential learning central to Benner's (1984) model.

The developmental journey of nursing students within simulation is also reflected in Cohen's (1981) model of student socialisation, which outlines four stages: unilateral dependence, negativity/independence, dependence/mutuality, and interdependence. Simulation facilitates movement through these stages by promoting autonomy, critical thinking, and mutual engagement with peers. By allowing students to negotiate their roles, take responsibility, and learn collaboratively, SBE supports the transition from passive learners to active, interdependent professionals.

Additionally, the study demonstrates that SBE supports students in navigating the theory-practice gap, which students reported generates confusion and anxiety during clinical placements. Rather than viewing these moments as setbacks, simulation enables students to reflect on and reconcile these tensions in a structured and supportive setting reframing confusion not as a failure of learning but as a productive tension that drives reflection, personal growth, and the refinement of professional values.

Although simulation cannot fully replace the unpredictability and complexity of clinical placements, it provides a reliable and emotionally safe space where students can internalise professional behaviours, explore ethical dilemmas, and practice skills. As such, simulation-based learning environments are important for fostering professional socialisation, particularly for students who may experience marginalisation or lack of support in clinical settings. By contrast, real-world placements, while invaluable, can be inconsistent in providing opportunities for reflective learning and identity development. Time pressures, staff shortages, and unsupportive cultures may lead students to suppress learning needs in favour of ‘fitting in’, while SBE offers a counterbalance to this dynamic, creating space for students to question, reflect, and develop an authentic sense of professional self.

In conclusion, this research affirms that professional socialisation is a dynamic, relational, and context-dependent process, and that simulation-based education is uniquely positioned to nurture it. The study shows how simulation promotes not only technical competence but also confidence, ethical awareness, and a strong professional identity. Thoughtful integration of SBE into nursing curricula is therefore not simply beneficial, it is important for preparing students to meet the complex interpersonal, clinical, and moral demands of modern nursing practice.

6.3 Research Question 2: Junior Students Socialisation

What is the contribution of the senior students to the professional socialisation of the junior students in such simulation-based activities?

This study highlights the positive contribution of near peer simulation-based education in advancing the professional socialisation and identity formation of nursing students. The findings reveal that senior students, positioned as accessible and relatable role models, provide a unique and psychologically safe learning environment that fosters junior students' autonomy, confidence, and engagement facilitated through trust, grounded in shared lived experiences.

The integration of Bandura's (1977) Social Learning Theory provides a robust explanatory lens for understanding how peer mentorship fosters skill acquisition and professional growth through observational learning and modelling behaviours of relatable figures. Within this context, near peer simulation offers a structured yet supportive arena where students can engage in meaningful socialisation processes without the burden of formal assessment anxiety or hierarchical pressures.

Importantly, the study identifies the unique roles of clinical mentors and senior student mentors. While clinical mentors bring greater expertise and accountability, their capacity to provide consistent, empathetic support may be compromised by the emotional strain associated with demanding clinical workloads. Conversely, senior peers, with their recent and shared learning experiences, create a more approachable and empathetic atmosphere that encourages openness and reflective practice, promoting psychological safety essential for effective learning and professional identity development.

The findings also highlight persistent barriers within clinical mentorship, including students' reluctance to seek clarification due to fear of judgment and perceived high expectations, which can exacerbate anxiety and impede learning. In contrast, near peer simulations mitigate these challenges by fostering a culture of acceptance and encouragement, enabling students to speak up and develop resilience and self-efficacy. Nonetheless, peer feedback must be carefully managed to avoid potential

anxiety related to peer judgment, which reinforces the importance of constructive feedback.

From an educational perspective, these insights advocate for the formal integration and expansion of near peer mentoring within simulation curricula, complementing clinical placements to provide a holistic learning experience. Such an integrated approach promises to enhance not only cognitive and technical competencies but also emotional and social dimensions of professional development, preparing nursing students to meet the complexities of contemporary healthcare environments with confidence, empathy, and reflective practice.

In conclusion, near-peer learning can play an important role alongside traditional mentorship in helping nursing students become confident, skilled, and professionally socialised, by filling an important gap in support by creating a sense of community and belonging, which helps students develop their professional identity. They also encourage habits of lifelong learning and reflection, which are key to growing as a nurse and providing excellent care.

6.4 Research Question 3: Benefits for Senior Students

What are the benefits and drawbacks for senior students when supporting junior students in simulation-based activities?

Simulation-based near-peer learning environments offer a powerful platform to support senior nursing students consolidate their learning, enhance leadership skills, and transition into confident nursing professionals. As senior students guide junior peers through simulation scenarios and debriefing sessions, they are provided with authentic opportunities to take on mentoring roles, reinforcing their clinical knowledge, strengthening their ability to synthesise information, reflecting a deeper level of engagement. By teaching others, they are encouraged to revisit and clarify their own understanding, an experience often described as one of the most effective ways to learn.

One of the key benefits reported by senior participants is the opportunity to engage in reflective practice. Leading simulations and supporting junior students encourages seniors to evaluate their own clinical decision-making, identify knowledge gaps, and refine their approach to patient care, which aligns closely with Weidman's (2010) model of professional socialisation, emphasising the role of reflection and interpersonal interaction. Through repeated exposure to simulation and peer teaching, senior students can begin to see themselves not just as learners, but as capable professionals with a role in shaping the learning of others, marking a significant shift in professional identity.

As they assume responsibility for guiding others, senior students further develop critical professional capabilities such as delegation, clear communication, and collaborative problem solving, which are essential skills when functioning effectively in multidisciplinary teams, particularly in high-pressure clinical environments. Acting as near peer mentors also provides an emotionally safe space to practice assertiveness, manage interpersonal dynamics, and provide feedback, skills that are often difficult to develop in hierarchical placement settings.

Confidence is another recurring theme in the experience of senior students within simulation, as teaching others affirms their sense of competence and validates their knowledge, contributing to increased self-efficacy. According to Bandura's (1977) social cognitive theory, such mastery experiences are critical in shaping beliefs about one's ability to succeed in future tasks. In addition to cognitive and leadership development, senior students also report growth in emotional intelligence. Supporting junior students, especially when they are anxious or unsure, cultivates empathy, patience, and a deeper understanding of the interpersonal demands of nursing, key skills when managing both patient care and professional relationships.

Furthermore, the experience of near peer mentorship allows senior students to appreciate their own progress over time; comparing their current competence to earlier stages of their education highlights how far they have come, fostering a sense of achievement and readiness for registration. This process mirrors the internalisation stage of Weidman's model (2010), where learners begin to embody the values and practices of the profession, which not only contributes to clinical

readiness but also facilitates a psychological shift toward professional identity as a registered nurse.

In conclusion, simulation-based near-peer learning provides senior nursing students with rich opportunities for advanced professional development. Through active engagement in teaching, reflection, and leadership, senior students strengthen their clinical knowledge, enhance critical soft skills, and consolidate their emerging professional identities. Grounded in theoretical frameworks such as Weidman's (2010) socialisation model and Bandura's (1977) social learning theory, these experiences contribute meaningfully to the transition from student to practicing nurse and set the foundation for future leadership in healthcare settings.

6.5 Recommendations for Practice

This study has explored the impact of simulation-based near-peer learning on the professional socialisation of nursing students, with particular focus on the development of critical thinking, confidence, empathy, and professional identity. The findings suggest that structured simulation activities, when supported by peer collaboration and effective facilitation, play a significant role in enhancing both the personal and professional growth of nursing students.

Although all students undergo the same number of clinical placements, their learning opportunities and experiences vary widely. Simulation, particularly when peer-led, can help level this variability by providing consistent, equitable opportunities for learning, practice, and reflection, creating a safe space where students can engage in realistic scenarios, test clinical skills, and learn from both peers and their own mistakes without the immediate risks associated with patient care.

A key contribution of this study is the recognition of near-peer learning in simulation as a dual-benefit model: junior students benefit from guidance and reassurance, while senior students gain confidence, leadership experience, and a deeper understanding of their own professional development. These outcomes closely align with Weidman et al's (2010) model of professional socialisation, which highlights the

importance of interactive, experiential, and reflective learning in the transition from novice to professional. Senior students, acting as mentors, begin to internalise the values and expectations of the nursing profession, shifting from peripheral participation to active, central roles in the learning community.

The development of critical thinking and clinical decision-making was also evident across both groups. Students reported becoming more independent, reflective, and confident in their ability to apply theoretical knowledge to practical situations. When combined with structured debriefing, students are able to critically evaluate their actions and learn collaboratively, reinforcing a deeper understanding of professional responsibilities.

Additionally, the study highlights the importance of psychosocial factors such as empathy, motivation, and a sense of belonging in supporting professional identity formation. Peer learning facilitated emotional support and mutual understanding, enabling students to share experiences openly, reduce anxiety, and build confidence. These emotional and relational aspects are central to professional socialisation and should not be overlooked in curriculum design.

Furthermore, it is proposed that this research is applicable to undergraduate programmes across the multidisciplinary team where simulation is embedded within the curriculum. The development of critical thinking and clinical decision-making is a key attribute across healthcare professions, and peer-led simulation has the potential to enhance professional socialisation, contributing to the development of confident, reflective, and collaborative practitioners.

However, despite these positive outcomes, the success of SBE is dependent on student engagement, the learning climate, and the quality of facilitation. Clear communication of learning objectives, adequate preparation, and the cultivation of psychological safety are essential for fostering motivation and active participation. Poor facilitation, unclear expectations, or a lack of faculty support may undermine the intended benefits.

Further recommendations are summarised below:

1. *Embed Structured Near-Peer Simulation in the Curriculum* - Simulation scenarios should include near peer mentoring components, where senior students are encouraged to support junior learners. This allows for reciprocal learning and the development of leadership, communication, and teaching skills among seniors, while boosting the confidence and understanding of juniors.

2. *Align Simulation Objectives with Professional Socialisation Outcomes* - Scenario design should not only target clinical skills but also aim to develop professional behaviours, critical reflection, empathy, and teamwork. Clear objectives related to identity formation, communication, and professional values should be identified alongside technical goals.

3. *Promote Student Collaboration through Scenario Co-Design* - Co-designing simulation scenarios with students promotes collaboration, engagement, and authenticity within simulation-based learning. Involving students in scenario development allows learning activities to better reflect learners' experiences, perceived learning needs, and the realities of clinical practice. Where appropriate, scenario co-design should therefore be incorporated into undergraduate curriculum, as it has the potential to enhance student ownership of learning, increase realism, and support collaboration.

4. *Support Reflective Debriefing Practices* - Debriefing should be consistently facilitated using structured, evidence-based models that promote reflective discussion. Facilitators should create an inclusive and non-judgmental environment where students can share experiences, explore emotions, and connect simulation to real-life practice.

5. *Recognising the Potential of Senior Students* - Senior students should be recognised as developing professionals and potential leaders. Opportunities for peer teaching, mentorship, and leadership within simulation can reinforce their self-efficacy, sense of preparedness, and identity as future nurses.

6. *Foster Psychological Safety and Motivation* - The simulation environment must be supportive and free of fear of judgment. Creating a culture of trust, inclusion, and open communication is essential to encouraging motivation and fostering meaningful learning, especially among students who may lack confidence.

7. *Addressing the theory-practice gap* – Facilitators should discuss the challenges students may face in practice and the differences they may encounter. The pragmatic approach of senior students should be further explored while encouraging junior students to maintain their professional values.

8. *Evaluate Outcomes Beyond Skills Acquisition* - Evaluations of simulation should include measures of professional identity development, confidence, teamwork, and empathy reflecting the holistic nature of nursing education and socialisation.

9. *Facilitator and Standardised Patient (SP) Training* – To ensure consistency, quality, and realism within simulation-based education, all facilitators and simulated patients (SPs) should receive structured and standardized training. This training should align with and adhere to the Association for Simulation Practice in Healthcare (ASPiH) Simulation-Based Education in Healthcare: Standards Framework and Guidance (2023), ensuring best practice in simulation delivery, facilitation, and learner support.

6.6 Study Limitations

While this study offers important contributions to the understanding of near peer learning within simulation-based education and its influence on the professional socialisation of nursing students, it is important to acknowledge its limitations.

Firstly, the sample size was relatively small, which may have introduced selection bias as participants who chose to take part may have had particularly positive or engaged experiences with simulation or peer learning, potentially skewing the

findings. A further limitation is the reliance on retrospective accounts from newly qualified nurses, some of whom participated in the simulation activities six months prior to data collection. Although this allowed for reflection on the long-term impact of the intervention, it also introduced the possibility of recall bias, where important details or feelings at the time may have been forgotten or reconstructed.

Additionally, this study focused on participants' perceptions and self-reported outcomes rather than objective measures of skill acquisition or academic achievement, which may limit the strength of any causal claims. It is also important to acknowledge that the senior students involved had not experienced formalised SBE within their programme due to the disruptions caused by the COVID-19 pandemic. This lack of prior exposure to structured SBE may have influenced their perspectives and responses during both the simulation and subsequent data collection.

When considering the Association for Simulation Practice in Healthcare (ASPiH) Simulation-Based Education in Healthcare: Standards Framework and Guidance (2023), it is important to acknowledge that, although the lecturers involved in this study had substantial experience in facilitating simulation activities, they had not undertaken formal, accredited simulation-specific programmes of learning. In addition, it is proposed that providing structured preparation for senior students undertaking the role of simulated patients would have been beneficial, particularly in promoting consistency, realism, and reliability across simulation scenarios.

Finally, the dual role of the researcher as an educator within the study institution raises the potential for both researcher and participant bias. Although reflexivity was maintained throughout the research process, and measures were taken to ensure transparency and rigour, complete objectivity cannot be assured. Despite these limitations, the study offers valuable insights into the pedagogical potential of near peer simulation and provides a foundation for further research in this area

6.7 Personal Reflection

Engaging in this doctoral research journey has been both professionally and personally rewarding. As a nurse educator with a longstanding interest in simulation based education, I began this study with a deep belief in its potential. However, the process of conducting rigorous, ethical, and reflective inquiry has challenged me to critically examine my assumptions and broaden my understanding of how learning and professional identity formation truly unfold within complex educational settings.

One of the most profound aspects of this research has been the opportunity to hear the voices of students and newly qualified nurses as they navigated their journeys of becoming professionals. Their openness, honesty, and insight during interviews and debriefs underscored the emotional, relational, and identity-driven dimensions of nursing education, elements that can often be overlooked in formal curricula. These stories from clinical practice reminded me of the vulnerability and resilience required in both learning and practice, and the essential role educators play in shaping the environments where personal and professional growth can occur.

A key challenge was recruiting students, which initially proved disappointing and surprising. I believe this was a naivety associated with being a novice researcher, as I had presumed that more students would be interested in participating. Upon reflection, I also believe the Covid-19 pandemic influenced recruitment, as students were facing significant challenges in their clinical practice and were primarily focused on their own personal and professional development during this time.

The process of co-designing simulation scenarios with students and facilitating peer learning activities reaffirmed the value of inclusive, student-centred approaches. I witnessed how collaboration empowered the students, challenged hierarchies, and nurtured a strong sense of ownership. These experiences deepened my commitment to fostering learning environments that prioritise psychological safety, mutual respect, and active engagement.

As a novice researcher, maintaining reflexivity was also crucial. At times, I found it challenging to balance my dual roles, particularly when interpreting participant feedback. Nonetheless, this tension encouraged a heightened awareness of positionality, and I made a conscious effort to recognise and set aside my personal assumptions, striving to remain open to insights that differed from or challenged my initial expectations.

Ultimately, this research has reinforced my belief that simulation-based education, when grounded in empathy, authenticity, and peer support, can be a powerful tool for professional socialisation. It has also sparked a desire to further explore the dynamics between pedagogy, identity, and culture in healthcare education. I complete this thesis with a deeper appreciation for the complexity of educational research, a strengthened sense of academic curiosity, and a renewed passion for supporting the next generation of nurses as they grow into their professional selves.

References

A

Abawi, L.A., 2012. Introducing refractive phenomenology. *International Journal of Multiple Research Approaches*, 6(2), pp.141–149.

Abbott, P., & Meerabeau, L., 1998. *The sociology of the caring professions*. London: Routledge.

Abdulmohdi, N., & McVicar, A., 2023. Investigating the clinical decision-making of nursing students using high-fidelity simulation, observation and think aloud: A mixed methods research study. *Journal of Advanced Nursing,* 79(2), pp.811–824.

Abualhaija, N. 2019. Using constructivism and student-centred learning approaches in nursing education. *International Journal of Nursing and Health Research*, [online] 93. Available at: https://www.researchgate.net/publication/338752983_Using_Constructivism_and_Student-Centered_Learning_Approaches_in_Nursing_Education [Accessed 3 Nov. 2023].

Ajjawi, R. & Higgs, J., 2008. Learning to reason: a journey of professional socialisation. *Advances in Health Sciences Education*, 13(2), pp.133–150.

Akkurt Yalcinturk, A., & Dissiz, M., 2024. The effect of standardized patient simulation method on getting nursing students to gain care providing skill for the individual diagnosed with dementia: a randomized controlled trial. *Educational Gerontology,* 50(3), pp.229–239.

Al-Ghareeb, A.Z., Cooper, S.J., & McKenna, L.G., 2017. Anxiety and clinical performance in simulated setting in undergraduate health professionals education: An integrative review. *Clinical Simulation in Nursing,* 13(10), pp.478–491.

Alconero-Camarero, A.R., Romero, A.G., Sarabia-Cobo, C.M., & Arce, A.M., 2016. Clinical simulation as a learning tool in undergraduate nursing: Validation of a questionnaire. *Nurse Education Today*, 39, pp.128–134.

Allan, H.T., Smith, P., & O'Driscoll, M., 2011. Experiences of supernumerary status and the hidden curriculum in nursing: A new twist in the theory-practice gap? *Journal of Clinical Nursing,* 20(5–6), pp.847–855.

Allemang, B., Sitter, K., & Dimitropoulos, G., 2022. Pragmatism as a paradigm for patient-oriented research. *Health Expectations,* 25(1), pp.38–47.

Almalkawi, I., Jester, R., & Terry, L., 2018. Exploring mentors' interpretation of terminology and levels of competence when assessing nursing students: An integrative review. *Nurse Education Today,* 69, pp.95–103.

Altun, S. & Tastan, S., 2022. Low-fidelity simulation vs. standardized patients in prevention and management of pressure injury education. Journal of Tissue Viability, 31(4), pp.643–648.

Andersen, T. & Watkins, K., 2018. The value of peer mentorship as an educational strategy in nursing. *Journal of Nursing Education,* 57(4), pp.217–224.

Andre, C., Deerin, J. & Leykum, L., 2017. Students helping students: vertical peer mentoring to enhance the medical school experience. *BMC Research Notes*, 10(1), p.176.

Andrea, J. & Kotowski, P., 2017. Using standardized patients in an undergraduate nursing health assessment class. *Clinical Simulation in Nursing,* 13(7), pp.309–313.

Anthony, S. & Jack, S., 2009. Qualitative case study methodology in nursing research: An integrative review. *Journal of Advanced Nursing,* 65(6), pp.1171–1181.

Antoniou, C., Clifton, R. & Wilson, V., 2022. Professional values in student nurse education: An integrative literature review. *Nursing Ethics*, 29(6), pp.1323–1340.

Arkan, B., Ordin, Y. & Yılmaz, D., 2018. Undergraduate nursing students' experience related to their clinical learning environment and factors affecting their clinical learning process*. Nurse Education in Practic*e, 29, pp.127–132.

Ashby, S.E., Adler, J. & Herbert, L., 2016. An exploratory international study into occupational therapy students' perceptions of professional identity. *Australian Occupational Therapy Journal*, 63, pp.233–243.

Aslan, H. & Erci, B., 2021. The impact of peer support provided to the first-year students of nursing on the clinical stress and psychomotor nursing skills. *International Journal of Caring Sciences*, 14(1), pp.68–78.

Association for Simulation Practice in Healthcare. (ASPiH). 2023. *Simulation-based education in healthcare: Standards framework and guidance*. Available at: https://aspih.org.uk/standards-2/ [Accessed 1 May 2024].

Athakkakath, M., Al-Maskari, A. & Kumudha, A., 2015. Coproduction of knowledge: A literature review and synthesis for a university paradigm. *Quality Approaches in Higher Education,* 6(1), pp.37–46.

Attenborough, J. & Abbott, S., 2020. Using storytelling in nurse education: The experiences and views of lecturers in a higher education institution in the United Kingdom. *Nurse Education in Practice*, 44:102762.

Au, M.L., Lo, M.S., Cheong, W., Wang, S.C. & Van, I.K., 2016. Nursing students' perception of high-fidelity simulation activity instead of clinical placement: A qualitative study. *Nurse Education Today*, 39, pp.16–21.

Australian Medical Association, 2006. Safe handover: safe patients. *AMA Clinical Handover Guide*. [online] Sydney: AMA. Available at: http://ama.com.au/nod [Accessed 17 Oct. 2023].

Aydın, G. Ö., Turan, N., Irmak, A. Y., Çelikkalp, Ü., Aygün, A. and Çakır, Z., 2022. Nursing students' individual values, inclination to ethical and professional values. *Perspectives in Psychiatric Care*, 58(2), pp.850-860.

B

Badowski, D. 2019. Peer Coaching Integrated in Simulation: Improving Intraprofessional Teamwork. *Journal of Professional Nursing*, 35(4), pp. 325–328.

Baillie, L. & Black, S. 2014. Values for professional nursing practice: an introduction. In: Baillie, L. & Black, S. (eds.) *Professional Values in Nursing*. London: Taylor and Francis.

Baldwin, A., Mills, J., Birks, M. & Budden, L. 2014. Role modelling in undergraduate nursing education: An integrative literature review. Nurse Education Today, 34(6), pp. e18–e26.

Ball, J. 2020. Analysing the implementation and effects of safe staffing policies in acute hospitals. *Nursing Management (UK),* 27(3), pp. 35–40.

Bandura, A., 1977. *Social learning theory.* Prentice-Hall.

Baraz, S., Memarian, R. & Vanaki, Z. 2015. Learning challenges of nursing students in clinical environments: A qualitative study in Iran. *Journal of Education and Health Promotion*, 4, p. 52.

Baxter, G. & McGowan, B. 2022. An exploration of undergraduate nursing students' experiences of mentorship in an Irish hospital. *British Journal of Nursing*, 31(15), pp. 812–817.

Bektas, İ., Bektas, M., Akdeniz Kudubeş, A. & Ayar, D. 2022. Prediction of ethical decision making with professional values in senior nursing student. *Perspectives in Psychiatric Care*, 58(4), pp. 2715–2722.

Benner, P. E. 1984. *From novice to expert: Excellence and power in clinical nursing practice*. Addison-Wesley Publishing Company.

Bennett, D., O'Flynn, S. & Kelly, M. 2015. Peer assisted learning in the clinical setting: an activity systems analysis. *Advances in Health Sciences Education,* 20(3), pp. 595–610.

Berro, E.A., Dane, F.C. & Knoesel, J. 2023. Exploring the relationships among realism, engagement, and competency in simulation. *Teaching and Learning in Nursing*, 18(4), pp. e241–e245.

Bianchi, M., Bagnasco, A., Bressan, V., Barisone, M., Timmins, F., Rossi, S. and Sasso, L., 2016. Patient safety competencies in undergraduate nursing students: A rapid evidence assessment. *Journal of Advanced Nursing,* 72(12), pp.2966–2979.

Bolton, G. 2010. *Reflective practice: Writing and professional development*. 3rd ed. London: Sage Publications.

Bond, M. 2009. Exposing shame and its effect on clinical nursing education. *Journal of Nursing Education*, 48, pp. 132–140.

Bonner, A. & Tohurst, G. 2002. Insider-outsider perspectives of participant observation. *Nurse Researcher*, 9(4), pp. 7–19.

Boothby, J., Gropelli, T. & Succheralli, L. 2019. An Innovative Teaching Model Using Intraprofessional Simulations. *Nursing Education Perspectives*, 40(3), pp. 184–185.

Bos, E., Silén, C. & Kaila, P. 2015. Clinical supervision in primary health care; experiences of district nurses as clinical supervisors - a qualitative study. *BMC Nursing,* 14, p. 39.

Bowling, A. 2014. *Research methods in health: Investigating health and health services*. 4th ed. Maidenhead: Open University Press.

Bovill, C., Bulley, C.J. & Morss, K., 2011. Engaging and empowering first-year students through curriculum design: perspectives from the literature. *Teaching in Higher Education*, 16(2), pp. 197–209.

Bozkurt, S.A., Samia, R. & Gazarian, P.K. 2023. Using Standardized Patient Simulation in Undergraduate Nursing Education: A Scoping Review. *Clinical Simulation in Nursing*, 74, pp. 3–18.

Brand, D. 2024. Exploration of student nurse experiences of being mentored by practice supervisors/assessors in placement settings. *British Journal of Nursing*, 33(15), pp. 708–712.

Brandon, A.F. & All, A.C. 2010. Constructivism theory analysis and application to curricula. *Nursing Education Perspectives,* 31(2), pp. 89–92.

Brannagan, K.B., Dellinger, A., Thomas, L., Mitchell, D. & Lewis, B. 2013. Impact of peer teaching on nursing students: Perceptions of learning environment, self-efficacy, and knowledge. *Nurse Education Today*, 33(11), pp. 1440–1447.

Brathwaite, A. C. & Lemonde, M., 2011. Team preceptorship model: A solution for students' clinical experience. *ISRN Nursing,* 2011, pp.1–7.

Braun, V. & Clarke, V. 2013. *Successful qualitative research: a practical guide for beginners.* London: SAGE.

Brickner, S., Sadeghi, N., Fard, M., Valizadeh, L. & Zamanzadeh, V. 2024. Professional values and nursing care quality: A descriptive study. *Nursing Ethics*, 31(5), pp.699–713.

Bridge, P., Cooper, D., Birch, D., Carmichael, M. A., Wynne, M., Jackson, M. & Gillis, S. 2022. Simulated placements as partial replacement of clinical training time: A Delphi consensus study. *Clinical Simulation in Nursing*, 68, pp.42–48.

Bright, A.L., 2019. Practicing leadership skills through peer mentoring and teaching: The lived experience of BSN students. *International Journal of Nursing Education Scholarship*, 16(1), pp.1–9.

Brooks Carthon, J.M., Hatfield, L., Plover, C., Dierkes, A., Davis, L., Hedgeland, T., Sanders, A.M., Visco, F., Holland, S., Ballinghoff, J., Del Guidice, M. & Aiken, L.H. 2019. Association of nurse engagement and nurse staffing on patient safety. *Journal of Nursing Care Quality*, 34(1), pp.40–46.

Brown, J., Stevens, J. & Kermode, S. 2013. Measuring student nurse professional socialisation: the development and implementation of a new instrument. *Nurse Education Today*, 33(6), pp. 565–573.

Browne, C., Wall, P., Batt, S. & Bennett, R. 2018. Understanding perceptions of nursing professional identity in students entering an Australian undergraduate nursing degree. *Nurse Education in Practice*, 32, pp.90–96.

Bruner, J.S. 1964. Mastery of techniques that cannot be understood without reference to such mastery. *American Psychologist*, 19(1), pp. 1–15.

Bryman, A. 2021. Social research methods. 6th ed. Oxford: Oxford University Press.

Bullock, I., Macleod Clark, J. & Rycroft-Malone, J. 2012. *Adult nursing practice: using evidence in care.* 1st ed. Oxford: Oxford University Press.

Burgess, A. & Nestel, D. 2014. Facilitating the development of professional identity through peer assisted learning in medical education. *Advances in Medical Education and Practice*, 5, pp.403–406.

Burns, D. 2015. *Foundations of Adult Nursing*. London: SAGE.

Burton, N.W., Pakenham, K.I. & Brown, W.J. 2010. Feasibility & effectiveness of psychosocial resilience training: a pilot study of the READY program. *Psychology, Health and Medicine*, 15(3), pp. 266–277.

Butler, S. 2025. Addressing underachievement in nursing students: the roles of practice assessors and supervisors. *British Journal of Nursing*, 34(11), pp. 566–569.

Byrne, D. 2020. Evaluating Cultural Competence in Undergraduate Nursing Students using Standardized Patients. *Teaching and Learning in Nursing*, 15(1), pp. 57–60.

C

Care Quality Commission (CQC). 2023. Regulation 18: Staffing. Available at https://www.cqc.org.uk/guidance-providers/regulations/regulation-18-staffing [Accessed 25 Oct. 2024].

Cant, R. P. & Cooper, S. 2009. Simulation based learning in nurse education: Systematic review. *Journal of Advanced Nursing*, 66(1), pp. 3–15.

Cant, R. P. & Cooper, S. J. 2017. Use of simulation-based learning in undergraduate nurse education: An umbrella systematic review. *Nurse Education Today* , 49, pp. 63-71.

Cant, R., Ryan, C. & Cooper, S. 2021. Nursing students' evaluation of clinical practice placements using the Clinical Learning Environment, Supervision and Nurse Teacher scale – A systematic review. *Nurse Education Today*, 104:104983.

Canzan, F., Saiani, L., Mezzalira, E., Allegrini, E., Caliaro, A. & Ambrosi, E. 2022. Why do nursing students leave bachelor program? Findings from a qualitative descriptive study. *BMC* Nurs 21(1), p. 71.

Carey, P. 2016. The impact of institutional culture, policy and process on student engagement in university decision-making. *Perspectives: Policy and Practice in Higher Education*, 20(2), pp.43–50.

Carey, M.C., Kent, B. and Latour, J.M. 2016. The role of peer-assisted learning in enhancing the learning of undergraduate nursing students in clinical practice: a

qualitative systematic review protocol. *JBI Database of Systematic Reviews and Implementation Reports*, 14(7), pp.117–123.

Carey, M.C., Chick, A., Kent, B. and Latour, J.M. 2018. An exploration of peer-assisted learning in undergraduate nursing students in paediatric clinical settings: An ethnographic study. *Nurse Education Today*, 65, pp.212–217.

Carvalho, T. 2014. Changing connections between professionalism and managerialism: a case study of nursing in Portugal. *Journal of Professions and Organisation*, 1, pp.176–190.

Casey, D. C. & Clark, L. 2011. Roles and responsibilities of the student nurse mentor: an update. *British Journal of Nursing*, 20(15), pp. 933-937.

Cengiz, Z., Gürdap, Z., Oltuluoğlu, H., Aslan, H. & Aktura, S. Ç. 2023. Developing nursing students' self-efficacy and problem solving skills via high-fidelity simulation. *Teaching and Learning in Nursing,* 18(4), pp. e167-e173.

Chan, D. S. K. 2001. Combining qualitative and quantitative methods in assessing hospital learning environments. *International Journal of Nursing Studies* 38, pp. 447-459.

Chapman, R. & Orb, A. 2001. Coping strategies in clinical practice: The nursing students' lived experience. *Contemporary Nurse*, 11(1), pp.95–102.

Chiang, L. & Liao, M. N., 2017. Transformative care rooted in evidence-based nursing. *J. Nurs.* 64 (1), 25–31.

Chiu-Yen, Y. & Kuei-Min, C. 2012. Experiencing simulated aging improves knowledge of and attitudes toward aging. *Journal of the American Geriatrics Society*, 60(5), pp. 957–961.

Choi, J. A., Kim, O., Park, S., Lim, H. & Kim, J.-H. 2021. The Effectiveness of Peer Learning in Undergraduate Nursing Students: A Meta-Analysis. *Clinical Simulation in Nursing,* 50, pp. 92-101.

Chongloi, N., Prashant, A. & Devagourou, A. 2024. Importance of Professional Values in Nursing Practice: Nurses Perspective*. International Journal of Nursing Education* 16(2), pp. 17-23.

Christiansen, A. & Bell, A. 2010. Peer learning partnerships: exploring the experience of pre-registration nursing students. *Journal of Clinical Nursing*, 19(5-6), pp. 803-810.

Cingel, M. & Brouwer, J. 2021. What makes a nurse today? A debate on the nursing professional identity and its need for change. *Nursing Philosophy*, 22(2), pp. 1-7.

Clark, K. R. 2018. Learning Theories: Constructivism. *Radiologic Technology,* 90(2), pp. 180-182.

Cleland, J., MacLeod, A. & Ellaway, R. H. 2021. The curious case of case study research. *Medical Education.* 55(10), pp. 1131-1141.

Coffey, A., 1999. *The ethnographic self: Fieldwork and the representation of identity*. London: SAGE.

Cohen, H. A. 1981.'*The Nurse's Quest for Professional Identity'* Menlo Park, CA: Addison-Wesley.

Cole, R., Flenady, T. & Heaton, L. 2023. High Fidelity Simulation Modalities in Pre-registration Nurse Education Programs: A Scoping Review. *Clinical Simulation in Nursing.* 80, pp. 64-86.

Colleen, R., Shannon, D., Patricia, C., Penny, H. & Tracey, S. 2021. Nursing and paramedicine student and academic perceptions of the two phase debrief model: A thematic analysis. *Nurse Education in Practice,* 51:103001.

Courtney-Pratt, H., Ford, K. & Marlow, A. 2015. Evaluating, understanding and improving the quality of clinical placements for undergraduate nurses: A practice development approach. *Nurse Education Practice,* 15(6), pp. 512-516.

Creswell, J.W. & Plano Clark, V.L. 2018. *Designing and conducting mixed methods research*. 3rd ed. Los Angeles; London: SAGE Publications.

Crombie, A., Brindley, J., Harris, D., Marks-Maran, D. & Thompson, T. M. 2013. Factors that enhance rates of completion: what makes students stay? *Nurse Education Today* 33(11), pp. 1282-1287.

Cronin, A. 2015. Focus groups. In: N. Gilbert & P. Stoneman, eds. *Researching social life*. 4th ed. London: SAGE Publications, pp. 226–241.

Crow, G.M. 2006. Complexity and the beginning principal in the United States: perspectives on socialisation. *Journal of Educational Administration*, 44(4), pp.310–325.

Cuesta-Martínez, R., González-Sanz, P., Raventós-Torner, R.-D., Jiménez-Herrera, M., Aguarón-García, M. J., Lorenzo-Allegue, L. & Font-Jimenez, I. 2024. Experiences of nursing students in a peer mentoring program during their clinical practices: A qualitative study. *Nurse Education Today*, 139:106234.

Curran, V., Fleet, L. & Whitton, C. 2024. Fostering "Reflection-On-Practice" Through a Multisource Feedback and Peer Coaching Pilot Program. *Journal Contin Education Health Prof* , 44(1), pp. 64-70.

Curtis, E., Ryan, C., Roy, S., Simes, T., Lapkin, S., O'Neill, B. & Faithfull-Byrne, A. 2016. Incorporating peer-to-peer facilitation with a mid-level fidelity student led simulation experience for undergraduate nurses. *Nurse Education in Practice*, 20, pp. 80-84.

Cust, F. 2018. Increasing confidence of first-year student nurses with peer mentoring. *Nursing Times,* 114(10), pp. 51-53.

D

D’Mello, S., Lehman, B., Pekrun, R. & Graesser, A. 2014. Confusion can be beneficial for learning. *Learning and Instruction*, 29, pp.153–170.

D'Souza, M.S., Karkada, S.N., Parahoo, K. & Venkatesaperumal, R. 2015. Perception of, and satisfaction with the clinical learning environment among nursing students. *Nurse Education Today*, 35(6), pp.833–840.

Darzi, A. (2024) *Independent investigation of the National Health Service in England*. London: Department of Health and Social Care. Available at: https://www.gov.uk/government/publications/independent-investigation-of-the-nhs-in-england [Accessed 12 Feb. 2025].

Davies, K., Harrison, K., Clouder, D.L., Gilchrist, M., McFarland, L. and Earland, J. 2011. Making the transition from physiotherapy student to interprofessional team member. *Physiotherapy*, 97(2), pp.139–144.

Davies, H., Sundin, D., Robinson, S. & Jacob, E. 2021. Does participation in extended immersive ward-based simulation improve the preparedness of undergraduate bachelor's degree nursing students to be ready for clinical practice as a registered nurse? An integrative literature review. *Journal of Clinical Nursing*, 30(19/20), pp.2897–2911.

Davies, H., Robertson, S., Sundin, D. & Jacob, E. 2022. Impact of pre-registration extended immersive ward-based simulation on student learning in preparation for clinical placement. *Nurse Education Today*, 119:105575

Davis, K., White, S. & Stephenson, M. 2016. The influence of workplace culture on nurses' learning experiences: a systematic review of qualitative evidence. *JBI Database of Systematic Reviews and Implementation Reports*, 14(6), pp.274–346.

Dawood, E., Alshutwi, S.S., Alshareif, S. & Shereda, H.A. 2024. Evaluation of the effectiveness of standardized patient simulation as a teaching method in psychiatric and mental health nursing. *Nursing Reports*, 14(2), pp.1424–1438.

Dalwood, N., Bowles, K.A., Williams, C., Morgan, P., Pritchard, S. & Blackstock, F. 2020. Students as patients: A systematic review of peer simulation in health care professional education. *Medical Education*, 54(5), pp. 387–399.

de Swardt, H.C. 2019. The clinical environment: a facilitator of professional socialisation. Health SA Gesondheid, 24, pp.1–7.

Decelle, G. 2016. Andragogy: A fundamental principle of online education for nursing. *Journal of Best Practices in Health Professions Diversity: Education, Research and Policy*, 9(2), pp.1263–1273.

Dennis, D., Furness, A., Brosky, J., Owens, J. & Mackintosh, S. 2020. Can student-peers teach using simulation-based learning as well as faculty: A non-equivalent posttest-only study. *Nurse Education Today*, 91:104470

Dennison, S. 2010. Peer mentoring: untapped potential. *Journal of Nursing Education*, 49(6), pp.340–342.

Denzin, N.K. 2012. Triangulation 2.0. *Journal of Mixed Methods Research*, 6(2), pp.80–88.

Department of Health (2012) *Compassion in practice: Nursing, midwifery & care staff – our vision and strategy*. London: Department of Health. Available at: https://www.england.nhs.uk/wp-content/uploads/2012/12/compassion-in-practice.pdf [Accessed 25 Oct. 2023].

Devakani, J.S.M., Jayabharathi, B., Manonmani, K., Lavanya, L. & Rajeshwari, M. 2019. Assessment of psychological distress among BSc nursing students at SRM College of Nursing. *International Journal of Nursing Education,* 11(3), pp.79–83.

Devlin, N. & Duggan, S. 2020. An evaluation of nurses' experiences of mentoring pre-registration students. *British Journal of Nursing,* 29(5), pp.308–313.

Dewey, J. (1995) *Experience & Education*. New York: Touchstone. (Original work published 1938)

Dias, J.M., Aderibigbe, S.A. & Abraham, M.S.,2022. Undergraduate nursing students' mentoring experiences in the clinical practicum: The United Arab Emirates (UAE) perspective. *Journal of Nursing Management,* 30(8), pp.4304–4313.

Dias, J.M., Aderibigbe, S.A., Abraham, M.S., Al-Hosani, A., Al-Marzooqi, H. and Al-Kaabi, F. 2024. Nursing students' stressors and coping strategies during their first clinical training: a qualitative study in the United Arab Emirates. *BMC Nursing*, 23(1), pp.1–11.

Díaz-Agea, J.L., Pujalte-Jesús, M.J., Leal-Costa, C., García-Méndez, J.A., Adánez-Martínez, M.G. & Jiménez-Rodríguez, D. 2021. Motivation: bringing up the rear in nursing education. Motivational elements in simulation. The participants' perspective. *Nurse Education Today*, 103:104925

Dieckmann, P., Tulloch, S., Dalgaard, A.E. & Varming, K. 2022. Psychological safety during the test of new work processes in an emergency department. *BMC Health Services Research*, 22(1), p.307.

Dinmohammadi, M., Peyrovi, H. & Mehrdad, N. 2013. Concept Analysis of Professional Socialization in Nursing. *Nursing Forum* 48(1), pp. 26-34.

Dkeidek, I., Mamlok-Naaman, R. & Hofstein, A. 2011. Effect of culture on high school students' question-asking ability resulting from an inquiry-oriented chemistry laboratory. *International Journal of Science and Mathematics Education*, 9(6), pp.1305–1331.

Donaldson, I. 2019. From mentor to supervisor and assessor: changes in pre-registration programmes. *British Journal of Nursing*, 28(1), p.64.

Donovan, L.M. & Mullen, L.K. 2019. Expanding nursing simulation programs with a standardized patient protocol on therapeutic communication. *Nurse Education in Practice*, 38, pp.126–131.

Douglass, B., Stager, S.L., Shaw, K., Hite, A., Solecki, S., Stanik-Hutt, J. & Tufts, G. 2024. Professional identity in nursing: Why it is important in graduate education. *Journal of Professional Nursing*, 52, pp.50–55.

Doyle, K., Sainsbury, K., Cleary, S., Parkinson, L., Vindigni, D., McGrath, I. & Cruickshank, M. 2017. Happy to help/happy to be here: Identifying components of successful clinical placements for undergraduate nursing students. *Nurse Education Today,* 49, pp.27–32.

Draganov, P.B., de Carvalho Andrade, A., Neves, V.R. & Sanna, M.C. 2013. Andragogy in nursing: a literature review. Investigación y Educación en Enfermería, 31(1), pp.86–94.

Duffy, K., 2004. Failing students: A qualitative study of factors that influence the decisions regarding assessment of students' competence in practice. London: Nursing and Midwifery Council.

Dumas, B.P., Hollerbach, A.D., Stuart, G.W. & Duffy, N.D. 2015. Expanding simulation capacity: senior-level students as teachers. *Journal of Nursing Education,* 54(9), pp.516–519.

Duodu, F., Mataa, M.M., Braun, S. & Saylor, D. 2024. Defining, evaluating, and developing a positive workplace culture. *Stroke,* 55(4), pp.e121–e123.

Dzikowicz, D. J. & Carey, M. G. (2022) 'Implementing interactive technology to teach electrocardiographic interpretation online', *Journal of Professional Nursing*, 42, pp. 148–155.

Dziri, C., Amara, I., Rhouma, M.B. & Cheikh, M.B. 2024. Low fidelity simulation versus standardized patient for teaching peripheral venous cannulation for nursing students: A crossover randomized trial. *Teaching and Learning in Nursing,* 19(2), pp.e420–e426.

E

Eggins, S., Slade, D. and Geddes, F. (eds.), 2016. *Effective Communication in Clinical Handover: From Research to Practice*. Berlin: De Gruyter Mouton.

Eick, S.A., Williamson, G.R. & Heath, V. 2012. A systematic review of placement-related attrition in nurse education. *International Journal of Nursing Studies,* 49(10), pp.1299–1309.

El Hussein, M. T., Dosani, A. & Al-Wadeiah, N. 2023. Final-Year Nursing Students' Experiences During the COVID-19 Pandemic: A Scoping Review. *Journal of Nursing Education* 62(1), pp. 6-11.

Embree, J.L. & Liebig, D. 2024. Knowledge domain of professional identity in nursing. *Journal of Continuing Education in Nursing*, 55(7), pp.328–330.

Eteläpelto, A., Vähäsantanen, K., Hokka, P. and Paloniemi, S. 2013. What is agency? Conceptualising professional agency at work. *Educational Research Review*, 10, pp.45–65.

Eva, K.W. 2009. Broadening the debate about quality in medical education research. *Medical Education,* 43(4), pp.294–296.

Eyikara, E. & Baykara, Z.G. 2017. The importance of simulation in nursing education. *World Journal on Educational Technology: Current Issues*, 9(1), pp.02–07.

F

Factor, E.M.R., Matienzo, E.T. & de Guzman, A.B. 2017. A square peg in a round hole: Theory-practice gap from the lens of Filipino student nurses. *Nurse Education Today*, 57, pp.82–87.

Fagermoen, M.S. 1997. Professional Identity: values embedded in meaningful nursing practice. *Journal of Advanced Nursing,* Vol 25, pp 434 – 441.

Fain, J.A. 2009. *Reading, understanding, and applying nursing research*. 5th ed.

Falk, K., Falk, H. & Jakobsson Ung, E. 2016. When practice precedes theory: A mixed methods evaluation of students' learning experiences in an undergraduate study program in nursing. *Nurse Education in Practice,* 16(1), pp.14–19.

Fawaz, M.A. & Hamdan-Mansour, A.M. 2016. Impact of high-fidelity simulation on the development of clinical judgment and motivation among Lebanese nursing students. *Nurse Education Today*, 46, pp.36–42.

Felstead, I., 2013. Role modelling and students' professional development. *British Journal of Nursing*, 22(4), pp.223–227.

Felton, A., Holliday, L., Ritchie, D., Langmack, G. & Conquer, A. 2013. Simulation: a shared learning experience for child and mental health pre-registration nursing students. *Nurse Education in Practice*, 13(6), pp.536–540.

Fisher, M. & King, J. 2013. An integrative literature review on preparing nursing students through simulation to recognise and respond to the deteriorating patient. *Journal of Advanced Nursing*, 69(11), pp.2375–2388.

Fitzgerald, A. & Clukey, L. 2021. Professional identity in graduating nursing students. *Journal of Nursing Education,* 60(2), pp.74–80.

Fletcher, K. 2006. ‘Beyond dualism: Leading out of oppression’, *Nursing Forum*, 41(2), pp. 50–59.

Flick, U. 2018. *An introduction to qualitative research.* 6th ed. London: Sage Publications.

Flott, E.A. & Linden, L. 2016. The clinical learning environment in nursing education: A concept analysis. *Journal of Advanced Nursing*, 72(3), pp.501–513.

Flott, E., Ball, S., Hanks, J., Minnich, M., Kirkpatrick, A.J., Rusch, L., Koziol, D., Laughlin, A., & Williams, J.P. 2022. Fostering collaborative learning and leadership through near-peer mentorship among undergraduate nursing students. *Nursing Forum*, 57(5), pp.750–755.

Foster, H., Ooms, A. & Marks-Maran, D. 2015. Nursing students' expectations and experiences of mentorship. *Nurse Education Today*, 35(1), pp.18–24.

Francis, R. 2013. *Report of the Mid Staffordshire NHS Foundation Trust Public Inquiry*. London: The Stationery Office.

Frankland, S. 2010. Can higher education improve the professional identity of CNNs? *Community Practitioner,* 83(12), pp.34–36.

Friedson, E. (1970) *The profession of medicine: A study of the sociology of applied knowledge*. New York: Dodd, Mead & Co.

G

Gaba, D.M. 2004. The future vision of simulation in health care. *Quality and Safety in Health Care,* 13(Suppl. 1), pp.i2–i10.

Galletta, M., Piras, I., Canzan, F. & Dal Santo, L. 2024. Cognitive flexibility and professional identity in nursing students: The modelling role. *Journal of Nursing Education*, 63(11), pp.764–772.

Ganley, B.J. & Linnard-Palmer, L. 2012. Academic safety during nursing simulation: Perceptions of nursing students and faculty. *Clinical Simulation in Nursing,* 8(2), pp.e49–e57.

Gardner, R. 2013. Introduction to debriefing. *Seminars in Perinatology,* 37(3), pp.166–174.

Gardiner-Shires, A.M. & Kloepfer, M.E. 2023. Examining the professional identity development of professional Master's athletic training students: A cohort study, *Athletic Training Education Journal*, 18(1), pp. 16–25.

Garrow, A., Devine, T., Knott, L. and Rae, C. 2022. How many practice hours are required to become a registered nurse? *British Journal of Nursing*, 31(17), pp.908–909.

Gassas, R., Ahmed, M.E. & Asloob, M. 2024. Ethical decision-making confidence and professional values among nurse leaders. *JONA: The Journal of Nursing Administration,* 54(6), pp.353–360.

Gause, G., Sehularo, L.A. & Matsipane, M.J. 2024. Factors that influence resilience among first-year undergraduate nursing students: A cross-sectional descriptive study. *Nursing Reports*, 14(2), pp.1324–1337.

Gazaway, S., Gibson, R.W., Schumacher, A. & Anderson, L. 2019. Impact of mentoring relationships on nursing professional socialization. *Journal of Nursing Management*, 27(6), pp.1182–1189.

Gemuhay, H.M., Kalolo, A., Mirisho, R., Chipwaza, B. & Nyangena, E. 2019. Factors affecting performance in clinical practice among preservice diploma nursing students in Northern Tanzania. *Nursing Research and Practice*, 2019, Article ID 3453085.

George, T.P., Gainey, K.L., Kershner, S.H., Weaver, D.L. & Hucks, J.M. 2020. Junior and senior nursing students: A near-peer simulation experience. *Journal of Nursing Education*, 59(1), pp.54–56.

Gerring, J., 2007. *Case study research: Principles & practices*. Cambridge: Cambridge University Press.

Gerrish, K. & Lacey, A. 2010. *The research process in nursing.* 6th ed. Chichester: Wiley-Blackwell.

Gilbert, N. & Stoneman, P., eds. 2015. *Researching social life*. 4th ed. London: Sage Publications.

Gilvari, T., Babamohamadi, H. & Paknazar, F. 2022. Perceived professional identity and related factors in Iranian nursing students: A cross-sectional study. *BMC Nursing*, 21(1), pp.1–8.

Glazzard, J., Rose, A. and Ogilvie, P. 2021. The impact of peer mentoring on students' physical activity and mental health. *Journal of Public Mental Health*, 20(2), pp.122–131.

Godfrey, N. & Joseph, M.L. 2023. Rebuilding professional identity: The time is now. *Nurse Leader*, 21(2), pp.179–182.

Goldkuhl, G. 2017. Pragmatism vs interpretivism in qualitative information systems research. *European Journal of Information Systems,* 21(2), pp.135–146.

Gonella, S., Brugnolli, A., Randon, G., Canzan, F., Saiani, L., Destrebecq, A. & Palese, A. 2019. Nursing students' experience of the mental health setting as a clinical learning environment: Findings from a national study. *Perspectives in Psychiatric Care,* 55(3), pp.383–390.

Goodare, P. 2015. "Are you ok there?" The socialisation of student and graduate nurses: do we have it right? *Australian Journal of Advanced Nursing*, 33(1), pp.38–43.

Gormley, G.J. & Murphy, P. 2023. When I say ... simulation. *Medical Education,* 57(12), pp.1182–1183.

Görücü, S., Türk, G. & Karaçam, Z. 2024. The effect of simulation-based learning on nursing students' clinical decision-making skills: Systematic review & meta-analysis. *Nurse Education Today,* 140:106270

Gough, S., Hellaby, M., Jones, N. & MacKinnon, R. 2012. A review of undergraduate interprofessional simulation-based education (IPSE), *Collegian*, 19, pp. 153–170.

Gray, S., Wheat, M., Christensen, M. & Craft, J. 2019. Snaps+: Peer-to-peer and academic support in developing clinical skills excellence in undergraduate nursing students: An exploratory study. *Nurse Education Today*, 73, pp.7–12.

Green, J. L. 2018. Peer support systems and professional identity of student nurses undertaking a UK learning disability nursing programme. Nurse Education in Practice, 30, pp. 56-61.

Green, J. & Thorogood, N. 2018. *Qualitative methods for health research.* 4th ed. Los Angeles; London: SAGE.

Green, J., Hanckel, B., Petticrew, M. Paparini, S. & Shaw, S. 2022 Case study research and casual influence. *BMC Medical Research Methodology,* 22:307

Greenway, K., Butt, G. & Walthall, H. 2019. What is a theory-practice gap? An exploration of the concept. *Nurse Education in Practice*, 34, pp.1–6.

Grobbel, C.C., Piscotty, R.J., Holka, K.A., Poly-Droulard, L.M. and Binge, A.L. 2016. An assessment of personal, professional, and leadership values of nursing students: defining a path towards becoming a caring professional. *International Journal for Human Caring*, 20(4), pp.193–196.

Grove, S.K., Burns, N. & Gray, J. 2013. *The practice of nursing research: Appraisal, synthesis, and generation of evidence.* 7th ed. St. Louis, Mo.: Elsevier/Saunders.

Gutiérrez-Puertas, L., Márquez-Hernández, V.V., Gutiérrez-Puertas, V., Rodríguez-García, M.C., García-Viola, A. & Aguilera-Manrique, G. 2021. Are you prepared to save a life? Nursing students' experience in advanced life support practice. *International Journal of Environmental Research and Public Health,* 18(3), p.1275.

H

Ha, E.-H. 2018. Experience of nursing students with standardized patients in simulation-based learning: Q-methodology study, *Nurse Education Today*, 66, pp. 123–129.

Haas, J., & Shaffir, W. 1987. Becoming doctors: The adoption of a cloak of competence. Greenwich, CT: Joanna Briggs Institute.

Haghighat, S., Borhani, F. & Ranjbar, H. 2020. Is there a relationship between moral competencies and the formation of professional identity among nursing students?, *BMC Nursing,* 19(1), pp. 1–7.

Hallmark, B.F. & Johnson, B.K. 2024. Creating an effective simulation environment. *Nursing Clinics of North America,* 59(3), pp. 345-358.

Hampton, D., Parrish, E. & Buckler, L. 2021. Professional values and role socialization of new NPs, *Nurse Practitioner*, 46(8), pp. 44–50.

Han, J., Yin, H. & Boylan, M. 2016. Teacher motivation: Definition, research development and implications for teachers', *Cogent Education,* 3(1).

Harder, N., Lemoine, J., Chernomas, W. & Osachuk, T. 2021. Developing a trauma-informed psychologically safe debriefing framework for emotionally stressful simulation events. *Clinical Simulation in Nursing*, 51, pp. 1–9.

Harrison, H., Birks, M., Franklin, R. & Mills, J. 2017. Case study research: Foundations and methodological orientations, *Forum: Qualitative Social Researc*h, 18(1).

Harrison-White, K. & Owens, J. 2018. Nurse link lecturers' perceptions of the challenges facing student nurses in clinical learning environments: A qualitative study, *Nurse Education in Practice*, 32, pp. 78–83.

Haas, J. & Shaffir, W., 1977. The Professionalization of Medical Students: Developing Competence and A Cloak of Competence. Symbolic Interaction, 1(1), pp. 71-88.

Hawker, C., Diaz-Navarro, C., Jones, B., Mitra, S., Cook. S. & Bartholomew, B. 2022. Developing an All-Wales definition of Simulation-Based Education. *International Journal of Healthcare Simulation*. 2(1): A40-A41

Hayden, J.K., Smiley, R.A., Alexander, M., Kardong-Edgren, S. & Jeffries, P.R. 2014. The NCSBN national simulation study: A longitudinal, randomized, controlled study replacing clinical hours with simulation in prelicensure nursing education. *Journal of Nursing Regulation*, 5(2), pp. S3–S40.

Health Education and Improvement Wales (HEIW) (Online) Debriefing Approach. Available at:https://heiw.nhs.wales/education-and-training/simulation-based-education/resources/debriefing-approach/ [Accessed 13 Oct 2024].

Health Education and Improvement Wales (HEIW). 2023. All Wales practice learning framework 2023 - Nursing. [Online]. Available at: https://heiw.nhs.wales/education-&-training/nursing-and-midwifery/placement-information/docs/all-wales-practice-learning-framework-2023-nursing/ [Accessed 25 Sep 2024].

Health Education England (HEE). 2022. NETS 2022 reporting. [Online]. Available at: https://www.hee.nhs.uk/our-work/quality/national-education-training-survey-nets/nets-2022-reporting [Accessed 1 Oct. 2024].

Heath, J., Walmsley, L.A., Braido, C., Brouwer, K., Wiggins, A.T. & Butler, K.M. 2022. Cultivating practices for resilience with baccalaureate nursing students: A pilot study. *Perspectives in Psychiatric Care,* 58(4), pp. 1529–1536

Hegenbarth, M., Rawe, S., Murray, L., Arnaert, A. & Chambers-Evans, J. 2015. Establishing and maintaining the clinical learning environment for nursing students: A qualitative study, *Nurse Education Today,* 35(2), pp. 304–309.

Hellaby, M. 2013. *Healthcare simulation in practice*. Keswick: M & K Publishing.

Henderson, S., Needham, J. & van de Mortel, T. 2020. Clinical facilitators' experience of near peer learning in Australian undergraduate nursing students: A qualitative study. *Nurse Education Today*, 95:104602.

Hill, R., Woodward, M. & Arthur, A. 2020. Collaborative Learning in Practice (CLIP): Evaluation of a new approach to clinical learning. *Nurse Education Today,* 85, pp. 1-6.

Hill, K., Schumann, M., Farren, L. & Clerkin, R. 2023. An evaluation of the use of low-fidelity and high-fidelity mannequins in clinical simulations in a module preparing final year children's and general nursing students for internship placement. *Comprehensive Child and Adolescent Nursing*, 46(4), pp. 295–308.

Hilli, Y., Salmu, M. & Jonsén, E. 2014. Perspectives on good preceptorship: A matter of ethics. *Nursing Ethics,* 21(5), pp. 565–575.

Hodges, H.F. 2011. Preparing new nurses with complexity science and problem-based learning. *Journal of Nursing Education*, 50(1), pp. 7–13.

Holmström, A. 2019. Radiography students' learning of plain X-ray examinations in simulation laboratory exercises: An ethnographic research. *Journal of Medical Imaging and Radiation Sciences*, 50(4), pp. 557–564.

Hood, K., Cant, R., Leech, M., Baulch, J., Gilbee, A. & GradCertHlthProfEduc. 2014. Trying on the professional self: nursing students' perceptions of learning about roles, identity and teamwork in an interprofessional clinical placement. *Applied Nursing Research*, 27(2), pp.109–114.

Hoover, J., Koon, A.D., Rosser, E.N. & Rao, K.D. 2020. Mentoring the working nurse: A scoping review. *Human Resources for Health,* 18(1), p. 52.

Hothersall, S.J. 2019. Epistemology & social work: Enhancing the integration of theory, practice and research through philosophical pragmatism. *European Journal of Social Work*, 22(5), pp. 860–870.

Houghton, C.E., Casey, D., Shaw, D. & Murphy, K. 2013. Students' experiences of implementing clinical skills in the real world of practice. *Journal of Clinical Nursing*, 22(13–14), pp. 1961–1969.

Houghton, C., Casey, D. & Smyth, S. 2017. Selection, collection and analysis as sources of evidence in case study research. *Nurse Researcher,* 24(4), pp. 36–41.

Huber, J. 1986. Symbolic interaction as a pragmatic perspective: The bias of emergent theory. *American Sociological Review,* 38, pp. 274–284.

Huffman, J., McNeil, G., Bismilla, Z. & Lai, A. 2016. Essentials of scenario building for simulation-based education. In: Grant, V. & Cheng, A. (eds). *Comprehensive healthcare simulation: Paediatrics*. Cham: Springer

Hughes, L.J., Mitchell, M.L. & Johnston, A.N.B. 2021. Moving forward: Barriers and enablers to failure to fail – A mixed methods meta-integration. *Nurse Education Today*, 98:104666.

Hulse, A.L. 2018. Designing and evaluating vascular access training using educational theory. *British Journal of Nursing*, 27(2), pp. 27–33.

Hunt, L.A. 2019. Developing a "core of steel": The key attributes of effective practice assessors. *British Journal of Nursing,* 28(22), pp. 1478–1484.

Hunter, K. & Cook, C. 2018. Role-modelling and the hidden curriculum: New graduate nurses' professional socialisation. *Journal of Clinical Nursing*, 27(15–16), pp. 3157–3170.

I

INACSL Standards Committee, Watts, P.I., McDermott, D.S., Alinier, G., Charnetski, M., Ludlow, J., Horsley, E. & Meakim, C. 2021. Healthcare Simulation Standards of Best Practice: Simulation design. *Clinical Simulation in Nursing*, 58, pp. 14–21.

INACSL Standards Committee, Persico, L., Ramakrishnan, S., Catena, R., Charnetski, M., Fogg, N., Jones, M., Ludlow, J., MacLean, H., Simmons, V.C., Smeltzer, S. & Wilk, A. 2024. The impact of prebriefing on simulation learning outcomes: A systematic review protocol. *Clinical Simulation in Nursing*, 89, Article 101507.

INACSL Standards Committee, DiGregorio, H., Todd, A., Blackwell, B., Brennan, B.A., Repsha, C., Shelton, C.M., Vaughn, J., Wands, L., Wruble, E. & Yeager, C. 2025a. Healthcare Simulation Standards of Best Practice: Facilitation. *Clinical Simulation in Nursing,* 105, 101776.

INACSL Standards Committee, Decker, S., Sapp, A., Bibin, L., Chidume, T., Crawford, S.B., Fayyaz, J., Johnson, B.K. & Szydlowski, J. 2025b. Healthcare Simulation Standards of Best Practice: The debriefing process. *Clinical Simulation in Nursing*, 105, Article 101775

Irvine, S., Williams, B. & McKenna, L. 2018. Near-peer teaching in undergraduate nurse education: An integrative review. *Nurse Education Today*, 70, pp. 60–68.

J

Jackson, S. & Steven, A., 2020. Discourse tensions: Professional socialisation into nursing within the university education system. *Nurse Education Today*, 91: 104478

Jacob, E.R., Sundin, D., Robertson, S. & Davies, H. 2022. Extended immersive simulation to develop nontechnical skills: Content analysis of students' views. *Collegian: Australian College of Nursing*, 29(3), pp 350 – 356.

Jacobsen, T.-I., Søsleth, M.G. & Gonzalez, M.T. 2022. Student nurses' experiences participating in a peer mentoring program in clinical placement studies: A meta synthesis. *Nurse Education in Practice*, 61:103328.

Jeanmougin, C., Cole, B., Zwilling, E. & Cooper, R. 2024. Cultivating a sense of belonging through peer mentoring. *Teaching and Learning in Nursing*, 19(3), pp.265–268.

Jimenez, Y.A., Gray, F., Di Michele, L., Said, S., Reed, W. & Kench, P. 2023. Can simulation-based education or other education interventions replace clinical placement in medical radiation sciences? A narrative review. *Radiography*, 29(2), pp.421–427.

Johnson, C.D. & Tan, N. 2021. Perspective: in pursuit of a learning culture. *Abdominal Radiology*, 46(10), pp.5017–5020.

Jones-Berry, S. 2021. Quitting before they qualify: what's behind the spike in nursing students dropping out? *Nursing Standard Online.* Available at https://rcni.com/nursing-standard/newsroom/analysis/quitting-they-qualify-whats-behind-spike-nursing-students-dropping-out-177551. [Accessed 26 Mar 2023].

Joung, J., Kang, KI., Yoon, H., Lee, J., Lim, H., Cho, D., Cha, M. & Choi, B. 2020. Peer mentoring experiences of nursing students based on the caring perspective: A qualitative study. *Nurse Education Today*, 94:104586.

K

Kachaturoff, M., Caboral-Stevens, M., Gee, M. & Lan, V.M. 2020. Effects of peer-mentoring on stress and anxiety levels of undergraduate nursing students: An integrative review. *Journal of Professional Nursing*, 36(4), pp.223–228.

Kainth, R. & Reedy, G. 2024. Transforming professional identity in simulation debriefing: A systematic meta ethnographic synthesis of the simulation literature. *Simulation in Healthcare*, 19(2), pp.90–104.

Kajander-Unkuri, S., Meretoja, R., Katajisto, J., Saarikoski, M., Salminen, L., Suhonen, R. & Leino-Kilpi, H. 2014. Self-assessed level of competence of graduating nursing students and factors related to it. *Nurse Education Today*, 34(5), pp.795–801.

Kantek, F., Kaya, A. & Gezer, N. 2017. The effects of nursing education on professional values: A longitudinal study. *Nurse Education Today*, 58, pp.43–46.

Karnish, K. & Shustack, L. 2019. Interprofessional socialization through acute-care simulation. *Radiologic Technology*, 90(6), pp.552–562.

Karnitschnig, L.M., Eddie, R. & Schwartz, A.L. 2023. Applying diversity principles and patient-centred, cultural curriculum through simulation and standardized patient actors. *Clinical Simulation in Nursing*, 77, pp.30–33.

Kay, J., Dunne, E. & Hutchinson, J.P. eds. 2010. *Rethinking the values of higher education – students as change agents?* Bristol: The Higher Education Academy.

Kaya, S.P., Özkan, B. & Çakmak, B. 2025. The relationship between the hidden curriculum and fourth-year nursing students' career plans, professional values, and professional readiness: A cross-sectional correlational study. *Nurse Education in Practice*, 82:104235.

Kaya, H., Şenyuva, E. & Bodur, G. 2017. Developing critical thinking disposition and emotional intelligence of nursing students: A longitudinal research. *Nurse Education Today*, 48, pp.72–77.

Kelly, J. M., Vardaman, S.A., Johnson, K.S. & Spurlock, A. 2024. Addressing the lack of professional values and behaviours among new nurses. *Hospital Topics*, 102(1), pp.44–51.

Kelly, S.H. 2020. The hidden curriculum: Undergraduate nursing students' perspectives of socialization and professionalism. Nursing Ethics, 27(5), pp.1250–1260.

Kelly, L. M. & Cordeiro, M. 2020. Three principles of pragmatism for research on organizational processes. *Methodological Innovations*, 13(2).

Kerthu, S.K. & Nuuyoma, V. 2019. Theory–Practice Gap: Challenges Experienced by Nursing Students at the Satellite Campus of a Higher Education Institution in Namibia. *International Journal of Higher Education*, 8(5), pp.21–28.

Kim, S.S. & De Gagne, J.C. 2018. Instructor-led vs. peer-led debriefing in preoperative care simulation using standardized patients. *Nurse Education Today*, 71, pp.34–39.

Kim, H.-K., Ryu, S. & Jang, K.-S. 2019. Effect of structured pre-simulation preparation and briefing on student's self-confidence, clinical judgment, and clinical decision-making in simulation. *Contemporary Nurse*, 55(4/5), pp.317–329.

Kim, G., Issenberg, S.B. & Roh, Y.S. 2024. Factors affecting nursing students' reflective thinking during simulation debriefing. *Nurse Educator*, 49(3), pp.E120–E125.

Kira, M. and Balkin, D.B. 2014. Interactions between work and identities: Thriving, withering, or redefining the self? *Human Resource Management Review*, 24(2), pp.131–143.

Knowles, M.S. 1979. *The adult learner: A neglected species*. 1st ed. Houston, TX: Gulf Publishing Company.

Knowles, M., Holton, E. & Swanson, R. 1984. *Andragogy in action: Applying modern principles of adult education*. San Francisco: Jossey-Bass.

Knowles, M.S., Holton III, E.F. & Swanson, R.A. 2011. *The adult learner: The definitive classic in adult education and human resource development*. 7th ed. New York: Routledge.

Kolawole, I.O., Andrew, A. & Olorunda, M.O.E. 2019. Knowledge and attitude of registered and student nurses on mentor-mentee relationship in Specialist Hospital, Yola. *International Journal of Caring Sciences*, 12(3), pp.1734–1743.

Kolb, D.A. 1984. *Experiential Learning*. Upper Saddle River, NJ: Prentice Hall.

Korniichuk, O.Y., Bambyzov, L.M., Kosenko, V.M., Spaska, A.M. & Tsekhmister, Y.V. 2021. Application of the case study method in medical education. *International Journal of Learning, Teaching and Educational Research*, 20(7), pp.175–191.

Kostovich, C.T. & Thurn, K.E. 2013. Group mentoring: a story of transition for undergraduate baccalaureate nursing students. *Nurse Education Today*, 33(4), pp.413–418.

Krautscheid, L., Fifer, P., Hernandez, R. & Blum, T. 2022. Perceptions and utilization of a multimedia teaching strategy to prevent student nurse attrition. *Teaching and Learning in Nursing*, 17(4), pp.461–464.

Krisi, M. & Nagar, R. 2023. The effect of peer mentoring on mentors themselves: A case study of college students. *International Journal of Disability, Development and Education*, 70(5), pp.803–815.

Kucukkelepce, G.E., Dinc, L. & Elcin, M. 2020. Effects of using standardized patients on nursing students' moral skills. *Nursing Ethics*, 27(7), pp.1587–1602.

Kukkonen, P., Suhonen, R. & Salminen, L. 2016. Discontinued students in nursing education – Who and why? *Nurse Education in Practice*, 17, pp.67–73.

L

Labrague, L.J., McEnroe-Petitte, D.M., Papathanasiou, I.V., Edet, O.B., Arulappan, J. & Tsaras, K. 2018. Stress and coping strategies among nursing students: An international study. *Journal of Mental Health*, 27(5), pp.402–408.

Ladyshewsky, R.K. 2010. Building competency in the novice allied health professional through peer coaching. *Journal of Allied Health*, 39(2), pp.e77–e82.

Lana, A., Sánchez-García, B., González-García, M., Fernández-Feito, A., González-Pando, D. & Carmona-Torres, J.M. 2024. Impact of nursing professional values on depression, stress, and anxiety among nurses during the COVID-19 pandemic. *Journal of Nursing Management*, pp.1–8.

Leal-Costa, C., Díaz-Agea, J.L., Tirado-González, S., Jiménez-Rodríguez, D., García-Moyano, L. & Rodríguez-Marín, J. 2024. Does clinical simulation learning enhance evidence-based practice? A quasi-experimental study involving nursing students. *Clinical Simulation in Nursing*, 87:101494.

Leathard, A. 2009. Interprofessional collaboration: From policy to practice in health and social care. Abingdon: Routledge.

Lee, M., Na, H.M., Kim, B., Kim, S.Y., Park, J. & Choi, J.Y. 2021. Mediating effects of achievement emotions between peer support and learning satisfaction in graduate nursing students. *Nurse Education in Practice*, 52:103003.

Lee, E.-K. & Ji, E.-J. 2024. The mediating role of flow in the relationship between simulation design and simulation educational satisfaction in Korean nursing students: A cross-sectional study. *BMC Nursing*, 23(1), pp.1–9.

Leigh, J. & Roberts, D. 2017. Implications for operationalising the new education standards for nursing. *British Journal of Nursing*, 26(21), pp.1196–1199.

Leigh, J., Littlewood, L. & Lyons, G. 2019. Reflection on creating a coaching approach to student nurse clinical leadership development. *British Journal of Nursing*, 28(17), pp.1150–1154.

Leiter, M.P. & Maslach, C. 2009. Nurse turnover: The mediating role of burnout. *Journal of Nursing Management*, 17(3), pp.331–339.

Levett-Jones, T. & Lathlean, J. 2008. Belongingness: A prerequisite for nursing students' clinical learning. *Nurse Education in Practice*, 8(2), pp.103–111.

Levy, J.S. 2008. Case studies: Types, designs, and logics of inference. *Conflict Management and Peace Science*, 25(1), pp.1–18.

Li, J. & Li, X. 2024. Professional values education for undergraduate nursing students: Developing a framework based on the professional values growth theory. *BMC Nursing*, 23(1), pp.1–25.

Li, L., Gao, F. & Guo, S. 2020. The effects of social messaging on students' learning and intrinsic motivation in peer assessment. *Journal of Computer Assisted Learning*, 36(4), pp.439–448.

Lillekroken, D., Kvalvaag, H.M., Lindeflaten, K., Fløl o, T.N., Krogstad, K. & Hessevaagbakke, E. 2024. Educating the nurses of tomorrow: Exploring first-year nursing students' reflections on a one-week senior peer-mentor supervised inspiration practice in nursing homes. *BMC Nursing*, 23(1), pp.1–15.

Lim, S., Xin Min, L., Chan, C.J.W., Dong, Y., Mikkonen, K. & Zhou, W. 2022. Peer mentoring programs for nursing students: A mixed methods systematic review. *Nurse Education Today*, 119:105577.

Lin, N. 2023. Moving beyond either-or debates: An invitation to reconcile ideological divides in evidence-based practice. *Clinical Social Work Journal*, 51(2), pp.188–197.

Lin, S., Chen, Y., Wang, M. & Zhang, L. 2024. Barriers and facilitators to the formation of professional identity among nursing students: A four-year longitudinal qualitative study. *Nurse Education Today*, 134:106087.

Lioce, L., Lopreiato, J., Anderson, M., Deutsch, E. S., Downing, D., Robertson, J. M., Diaz, D. A., Spain, A. E. and the Terminology and Concepts Working Group (eds) 2025. Healthcare Simulation Dictionary: Third Edition. Rockville, MD: Agency for Healthcare Research and Quality, AHRQ Publication No. 24-0077.

Lockspeiser, T.M., O'Sullivan, P., Teherani, A. & Muller, J. 2008. Understanding the experience of being taught by peers: the value of social and cognitive congruence. *Advances in Health Sciences Education*, 13(3), pp.361–372.

Lodge, J.M., Kennedy, G., Lockyer, L., Arguel, A. & Pachman, M. 2018. Understanding difficulties and resulting confusion in learning: an integrative review. *Frontiers in Education*, 3, pp 1–10.

Loke, A.J.T.Y. & Chow, F.L.W. 2007. Learning partnership: the experience of peer tutoring among nursing students: a qualitative study. *International Journal of Nursing Studies*, 44(2), pp.237–244.

Long, K.M., McDermott, F. & Meadows, G.N. 2018. Being pragmatic about healthcare complexity: our experiences applying complexity theory and pragmatism to health services research. *BMC Medicine*, 16(1):94.

Lopez, V., Yobas, P., Chow, Y.L. & Shorey, S. 2018. Does building resilience in undergraduate nursing students happen through clinical placements? A qualitative study. *Nurse Education Today*, 67, pp.1–5.

Lovell, B. 2015. 'We are a tight community': social groups and social identity in medical undergraduates. *Medical Education*, 49(10), pp.1016–1027.

Lu, H., Zhao, Y. & While, A. 2019. Job satisfaction among hospital nurses: a literature review. *International Journal of Nursing Studies*, 94, pp.21–31.

Luna, J.A. & Behan, D.F. 2024. Increasing nurse confidence through high-fidelity simulation. *MEDSURG Nursing*, 33(1), pp.24–50.

M

Ma, J., Lee, Y. & Kang, J. 2023. Standardized patient simulation for more effective undergraduate nursing education: a systematic review and meta-analysis. *Clinical Simulation in Nursing*, 74, pp.19–37.

MacKenzie, D., Creaser, G., Sponagle, K., Gubitz, G., MacDougall, P., Blacquiere, D., Miller, S. & Sarty, G. 2017. Best practice interprofessional stroke care collaboration and simulation: the student perspective. *Journal of Interprofessional Care*, 31(6), pp.793–796.

Maddock, A. & Oates, J. 2022. Connections, rituals and identities: healthcare students' descriptions of objects that represent resilience. *Journal of Mental Health Training, Education and Practice*, 17(3), pp.274–287.

Madsgaard, A., Roykenes, K., Smith-Strom, H. & Kvernenes, M. 2022. The affective component of learning in simulation-based education—facilitators' strategies to establish psychological safety and accommodate nursing students' emotions. *BMC Nursing*, 21(1), p.91.

Mafumo, J.L., Tshililo, A.R. & Luhalima, T.R. 2022. Facilitators of professional socialisation of learners in the clinical learning areas: a qualitative systematic review. *Curationis*, 45(1), pp.1–11.

Mainhard, T., Oudman, S., Hornstra, L., Bosker, R.J. & Goetz, T. 2018. Student emotions in class: the relative importance of teachers and their interpersonal relations with students. *Learning and Instruction*, 53, pp.109–119.

Maltby, J., Williams, G., McGarry, J. & Day, L. 2015. *Research methods for nursing and healthcare*. 2nd ed. Harlow: Pearson Education.

Mao, A., Lu, S.-e., Lin, Y. & He, M. 2021. A scoping review on the influencing factors and development process of professional identity among nursing students and nurses. *Journal of Professional Nursing*, 37(2), pp.391–398.

Mariani, B., Cantrell, M.A., Meakim, C., Prieto, P. & Dreifuerst, K.T. 2013. Structured debriefing and students' clinical judgment abilities in simulation. *Clinical Simulation in Nursing*, 9(5), pp.e147–e155.

Mariet, J. 2016. Professional socialization models in nursing. *International Journal of Nursing Education*, 8(3), pp.143–148.

Markowski, M., Bower, H., Essex, R. & Yearley, C. 2021. Peer learning and collaborative placement models in health care: a systematic review and qualitative synthesis of the literature. *Journal of Clinical Nursing*, 30(11–12), pp.1519–1541.

Maslow, A.H. 1971. *The farther reaches of human nature*. Oxford: Viking.

Mathe, T.L., Downing, C. & Kearns, I. 2021. South African student nurses' experiences of professional nurses' role-modelling of caring. *Journal of Professional Nursing*, 37(1), pp.5–11.

Mathisen, C., Bjørk, I.T., Heyn, L.G., Jacobsen, T.-I. & Hansen, E.H. 2023. Practice education facilitators' perceptions and experiences of their role in the clinical learning environment for nursing students: a qualitative study. *BMC Nursing*, 22(1), pp.1–9.

Matthews, K.E., Dwyer, A., Hine, L. & Turner, J. 2018. Conceptions of students as partners. *Higher Education*, 76(6), pp.957–971.

Maynard, L. 2012. Using clinical peer coaching for patient safety. *AORN Journal*, 96(2), pp.203–205.

Mbalinda, S.N., Najjuma, J.N., Gonzaga, A.M., Livingstone, K. & Musoke, D. 2024. Understanding and barriers of professional identity formation among current students and recent graduates in nursing and midwifery in low resource settings in two universities: a qualitative study. *BMC Nursing*, 23(1), pp.1–10.

McCaughey, C.S. & Traynor, M.K. 2010. The role of simulation in nurse education. *Nurse Education Today*, 30(8), pp.827–832.

McCulloch, A. 2009. The student as co-producer: Learning from public administration about the student–university relationship. *Studies in Higher Education*, 34(2), pp.171–183.

McDermott, D.S., Ludlow, J., Horsley, E. & Meakim, C. 2021. Healthcare Simulation Standards of Best Practice Prebriefing: Preparation and briefing. *Clinical Simulation in Nursing*, 58, pp.9–13.

McKenna, L. & French, J. 2011. A step ahead: Teaching undergraduate students to be peer teachers. *Nurse Education in Practice*, 11(2), pp.141–145.

McKenna, L. & Williams, B. 2017. The hidden curriculum in near-peer learning: An exploratory qualitative study. *Nurse Education Today*, 50, pp.77–81.

McQuiston, L.S. & Hanna, K. 2015. Peer coaching. *Nurse Educator*, 40(2), pp.105–108.

Melrose, S., Park, C. & Perry, B. 2021. *Creative Clinical Teaching in the Health Professions*. Athabasca, AB: Athabasca University Press. p. 119.

Merriam, S.B. 2009. *Qualitative research: A guide to design and implementation*. 2nd ed. San Francisco: Jossey-Bass.

Miller, H., Bosselait, L., Venturato, L., Irion, K., Schmidt, N., DiGeronimo, J. & Pritchard, T. 2019. Benefits of peer mentoring in prelicensure nursing education: A dual perspective. *Nurse Educator*, 44(3), pp.159–163.

Monteiro, S. & Sibbald, M. 2020. Aha! Taking on the myth that simulation-derived surprise enhances learning. *Medical Education*, 54(6), pp.510–516.

Moon, S. & Chang, S.J. 2023. Professional socialization of hospital nurses: A scale development and validation study. *BMC Nursing*, 22(1), pp.1–10.

Morse, J.M. 1991. Approaches to qualitative-quantitative methodological triangulation. *Nursing Research*, 40(2), pp.120–123.

Moule, P. & Goodman, M.L. 2014. *Nursing research: An introduction*. 2nd ed. London: Sage.

Muller, D.A., Bewes, J., Sharma, M.D. & Reimann, P. 2007. Saying the wrong thing: Improving learning with multimedia by including misconceptions. *Journal of Computer Assisted Learning*, 24(2), pp.144–155.

Mpangane, E.A., Makhene, A. & Ally, H. 2021. Experiences of student nurses on role modelling of a therapeutic approach by registered nurses: Recommendations for improvement. *Curationis*, 44(1), pp.1–8.

Munshi, F., Lababidi, H. & Alyousef, S. 2015. Low- versus high-fidelity simulations in teaching and assessing clinical skills. *Journal of Taibah University Medical Sciences*, 10(1), pp.12–15.

Myall, M., Levett-Jones, T. & Lathlean, J. 2008. Mentorship in contemporary practice: the experiences of nursing students and practice mentors. *Journal of Clinical Nursing*, 17(14), pp.1834–1842.

N

Nair, M.A., Muthu, P. & Abuijlan, I. 2024. The effectiveness of high-fidelity simulation on clinical competence among nursing students. *SAGE Open Nursing*, May 6;10:23779608241249357

National Health Service (NHS) England. 2012. *The 6Cs: Care, Compassion, Competence, Communication, Courage, Commitment*. [online] Available at:

https://www.england.nhs.uk/wp-content/uploads/2012/11/6c-a4-paper.pdf [Accessed 25 May 2023].

National Health Service (NHS) England. 2023. *NHS Staff Survey Results 2022*. March 2023, p.30. Available at: https://nhsproviders.org/resources/nhs-staff-survey-results-2022 [Accessed 19 June 2024].

National Institute for Health & Care Excellence (NICE). 2018. Chapter 32 Structured patient handovers: Emergency and acute medical care in over 16s: service delivery and organisation, NICE guideline 94. Available at: https://www.nice.org.uk/guidance/ng94/evidence/32.structured-patient-handovers-pdf-172397464671. [Accessed 15 Feb 2022].

Natterøy, C.S., Tveit, B. & Raustøl, A. 2023. Nurse mentors' experiences with suitability assessments in clinical placement: A qualitative study. *Nurse Education in Practice*, 72: 103755

Nawaz, S., Kennedy, G., Bailey, J. & Mead, C. 2020. Moments of Confusion in Simulation-Based Learning Environments. *Journal of Learning Analytics*, 7(3), pp.118–137.

Neary, M. 2000. Supporting students' learning & professional development through the process of continuous assessment and mentorship. *Nurse Education Today*, 20, pp.463–474.

Nel, K. 2024. Supporting student nurses to demonstrate professional values. *Nursing Times*, 120(3), pp.39–41.

Nelwati, Abdullah, K.L. & Chan, C.M. 2018. A systematic review of qualitative studies exploring peer learning experiences of undergraduate nursing students. *Nurse Education Today*, 71, pp.185–192.

Nestel, D., Krogh, K. and Kolbe, M. 2018. Exploring realism in healthcare simulations. In: Nestel, D., Kelly, M., Jolly, B. and Watson, M. (eds.) Healthcare simulation education: Evidence, theory and practice. Oxford: Wiley Blackwell, pp. 23–28.

Neutzling, M., Pratt, E. & Parker, M. 2019. Perceptions of learning to teach in a constructivist environment. *The Physical Educator*, 76(3), pp.756–776.

Newton, R.H. & Krebs, A. 2020. Bridging the theory-practice gap using simulation to teach care of patients with disabilities. *Teaching and Learning in Nursing*, 15(4), pp.233–236.

Nilkin, P. & Kenworthy, N. 2005. *Teaching and assessing in nurse practice: An experiential approach*. 3rd ed. London: Elsevier, Ballière Tindall.

Noone, T. & Seery, A. 2018. Critical thinking dispositions in undergraduate nursing students: A case study approach. *Nurse Education Today*, 68, pp.203–207.

Nordquist, J., Hall, J., Caverzagie, K., Snell, L., Chan, M., Thoma, B., Razack, S. & Philibert, I. 2019. The clinical learning environment. *Medical Teacher*, 41(4), pp.366–372.

Norman, K. 2015. How mentors can influence the values, behaviours & attitudes of nursing staff through positive professional socialisation. *Nursing Management - UK*, 22(8), pp.33–38.

North, H., Kennedy, M. & Wray, J. 2019. Are mentors failing to fail underperforming student nurses? An integrative literature review. *British Journal of Nursing*, 28(4), pp.250–255.

Nowell, S.L., Norris, J.M., White, D.E. & Moules, N.J. 2017. Thematic Analysis: Striving to Meet the Trustworthiness Criteria. *International Journal of Qualitative Methods*, 16, pp.1–13.

Ntho, T.A., Pienaar, A.J. & Sehularo, L.A. 2020. Peer-mentees' challenges in an undergraduate peer-group clinical mentoring programme in a nursing education institution. *Health SA Gesondheid*, 25, p.1435.

Nursing and Midwifery Council (NMC). 2008. *Standards to Support Learning and Assessment in Practice*. London: NMC. Available at: https://www.nmc.org.uk/standards-for-education-and-training/standards-to-support-learning-and-assessment-in-practice/ [Accessed 1 Mar 2022].

Nursing and Midwifery Council (NMC). 2018. *The code: Professional standards of practice and behaviour for nurses, midwives and nursing associates*. London. NMC. Available at: https://www.nmc.org.uk/standards/code/ [Accessed 26 May 2022].

Nursing and Midwifery Council (NMC). 2018a. *Standards for Student Supervision and Assessment*. London: NMC. Available at: https://www.nmc.org.uk/globalassets/sitedocuments/standards/2024/standards-for-student-supervision-and-assessment.pdf [Accessed 5 Mar 2022].

Nursing and Midwifery Council (NMC). 2018b. *Standards of Proficiency for Registered Nurses*. London: NMC. Available at: https://www.nmc.org.uk/globalassets/sitedocuments/standards/2024/standards-of-proficiency-for-nurses.pdf [Accessed 23 Mar 2022].

Nursing and Midwifery Council (NMC). 2019. *How to Revalidate with the NMC*. London: NMC. Available at: https://www.nmc.org.uk/revalidation/ [Accessed 19 Jul 2024].

Nursing and Midwifery Council (NMC). 2020. *Principles for Preceptorship*. London: NMC. Available at: https://www.nmc.org.uk/globalassets/sitedocuments/nmc-publications/nmc-principles-for-preceptorship-a5.pdf [Accessed 1 Mar 2022].

Nursing Midwifery Council (NMC). 2022. *Current Recovery Programme Standards*. Available at: https://www.nmc.org.uk/globalassets/sitedocuments/education-standards/current-recovery-programme-standards.pdf [Accessed 15 May 2023].

Nursing Midwifery Council (NMC). 2023a. *Standards Framework for Nursing and Midwifery Education*. Available at: https://www.nmc.org.uk/standards/standards-for-nursing-and-midwifery-education/standards-framework-for-nursing-and-midwifery-education/ [Accessed 17 June 2024].

Nursing Midwifery Council (NMC). 2023b. *Simulated Practice Learning*. Available at: https://www.nmc.org.uk/standards/guidance/supporting-information-for-our-education-and-training-standards/simulated-practice-learning/. [Accessed 17 Jun 2024].

Nursing and Midwifery Council (NMC). 2023c. *Standards for Student Supervision and Assessment*. London: NMC. Available at: https://www.nmc.org.uk/globalassets/sitedocuments/standards/2024/standards-for-student-supervision-and-assessment.pdf [Accessed 5 Mar 2024].

Nursing and Midwifery Council (NMC). 2024. *Simulated Practice Learning in Preregistration Nursing Programmes: An Evaluation of the Experience of Universities Approved to Deliver up to 600 Practice Learning Hours Through Simulation*. Available at: https://www.nmc.org.uk/globalassets/sitedocuments/simulated-practice-learning/reports/2024/evaluation-of-simulated-practice-learning-in-pre-registration-nursing-programmes.pdf [Accessed 23 Nov 2024].

Nursing and Midwifery Council (NMC). 2024a. *Quality Assurance Framework for Nursing, Midwifery and Nursing Associate Education*. Available at https://www.nmc.org.uk/globalassets/sitedocuments/qa-link/quality-assurance-framework--for-nursing-and-midwifery-education.pdf [Accessed 1 Dec 2024].

O

Oh, P.-J., Jeon, K.D. & Koh, M.S. 2015. The effects of simulation-based learning using standardized patients in nursing students: A meta-analysis. *Nurse Education Today*, 35(5), pp.e6–e15.

Okuyama, A., Wagner, C. & Bijnen, B. 2014. Speaking up for patient safety by hospital-based health care professionals: a literature review. *BMC Health Services Research*, 14(1), p.61.

Olasoji, M., Huynh, M., Edward, K.L., Willetts, G. & Garvey, L. 2020. Undergraduate student nurses' experience of mental health simulation pre-clinical placement: A pre/post-test survey. *International Journal of Mental Health Nursing*, 29(5), pp.820–830.

Olaussen, C., Heggdal, K. & Tvedt, C.R. 2020. Elements in scenario-based simulation associated with nursing students' self-confidence and satisfaction: A cross-sectional study. *Nursing Open*, 7(1), pp.170–179.

Olmos-Vega, F.M., Stalmeijer, R.E., Varpio, L. & Kahlke, R. 2022. A practical guide to reflexivity in qualitative research: AMEE Guide No. 149. *Medical Teacher*, 44(3), pp.241–251.

Orozco, E. 2012. Defining culture and its impact on practice. *Migrant Health Newsline*, (1), pp.3–5.

Ousey, K. & Gallagher, P. 2007. The theory-practice relationship in nursing: a debate. *Nurse Education in Practice*, 7(4), pp.199–205.

P

Palmer, W., Rolewicz, L. & Dodsworth, E. 2023. Waste not, want not: Strategies to improve the supply of clinical staff to the NHS. *Nuffield Trust*. Available at: https://www.nuffieldtrust.org.uk/research/waste-not-want-not-strategies-to-improve-the-supply-of-clinical-staff-to-the-nhs [Accessed 25 May 2024].

Paparini, S., Green, J., Papoutsi, C., Murdoch, J., Petticrew, M., Greenhalgh, T., Hanckel, B. & Shaw, S. 2020. Case study research for better evaluations of complex interventions: rationale and challenges. *BMC Medicine*, 18(1), p.301.

Papastavrou, E., Dimitriadou, M., Tsangari, H. & Andreou, C. 2016. Nursing students' satisfaction of the clinical learning environment: a research study. *BMC Nursing*, 15, pp.1–10.

Parahoo, K. 2014. *Nursing research: principles, process and issues*. 3rd ed. London: Bloomsbury Academic.

Parker, B. & Myrick, F. 2010. Transformative learning as a context for human patient simulation. *Journal of Nursing Education*, 49(6), pp.326–332.

Parker, B.C. & Myrick, F. 2009. A critical examination of high-fidelity human patient simulation within the context of nursing pedagogy. *Nurse Education Today*, 29(3), pp.322–329.

Parsons, A. & White, J. 2008. Learning from reflection on intramuscular injections. *Nursing Standard*, 22(17), pp.35–40.

Partner, A., Shiner, N., Hyde, E. & Errett, S. 2022. First year student radiographers' perceptions of a one-week simulation-based education package designed to increase clinical placement capacity. *Radiography*, 28(3), pp.577–585.

Paskins, Z. & Peile, E. 2010. Final year medical students' views on simulation-based teaching: a comparison with the Best Evidence Medical Education Systematic Review. *Medical Teacher*, 32(7), pp.569–577.

Patton, N. 2014. *Clinical learning spaces: Crucibles for development of professional practice capabilities*. PhD thesis. Charles Sturt University, Sydney.

Pearce, L. 2019. New approach to nurse education affects every registrant – but are you ready? *Nursing Standard*, 34(9), pp.24–26.

Pearce, L. 2023.Practice supervisors: what do they do? Designed to support students' development, the role can also enhance your practice as a registered nurse or nursing associate. *Nursing Standard*, 38(12), pp.59–60.

Pehlivan Çoştu, E. & Bilgiç, Ş. 2023. The effectiveness of peer coaching in the skill development of nursing students: The experimental study. *Turkiye Klinikleri Journal of Nursing Sciences*, 15(3), pp.689–697.

Peiser, G., Ambrose, J., Burke, B. & Davenport, J. 2018. The role of the mentor in professional knowledge development across four professions. *International Journal of Mentoring and Coaching in Education*, 7(1), pp.2–18.

Perumal, V.R. & Singh, M.D. 2022. Mentorship in nursing in Canada – A scoping review. *Nurse Education in Practice*, 65:103461

Pilcher, J., Goodall, H., Jensen, C., Huwe, V., Jewell, C., Reynolds, R. & Karlsen, K.A. 2012. Special Focus on Simulation: Educational Strategies in the NICU: Simulation-Based Learning: It's Not Just for NRP. *Neonatal Network*, 31(5), pp.281–287.

Pineda, J.L., Villanueva, R.L. & Tolentino, J.A.M. 2022. Virtual Focus Group Discussions: the new normal way to promote reflective practice. *Reflective Practice*, 23(2), pp.190–202.

Polgar, S. & Thomas, S.A. 2008. *Introduction to research in the health sciences*. 5th ed. Edinburgh; New York: Churchill Livingstone Elsevier.

Polit, D.F. & Hungler, B.P. 1999. *Nursing research: principles and methods*. 7th ed. Philadelphia: Lippincott.

Polit, D.F. & Beck, C.T. 2017. *Nursing research: generating and assessing evidence for nursing practice*. 10th ed. Philadelphia: Wolters Kluwer Health.

Price, S.L., Sim, S.M., Little, V., Almost, J., Andrews, C., Davies, H., Harman, K., Khalili, H., Sutton, E. & LeBrun, J. 2021. A longitudinal, narrative study of professional socialisation among health students. *Medical Education*, 55(4), pp.478–485.

Q

Qin, Z., Zhang, H., Su, S., Guo, D., Wu, P., Huang, Y. & Wang, H. 2024. Perceived professional preparedness and identity among senior nursing students: a latent profile analysis. *BMC Nursing*, 23(1), pp.1-11.

Quinn, F. 2013. *Principles and practice of nurse education*. 4th ed. Cheltenham: Nelson Thornes.

R

Ragsdale, M. & Schuessler, J.B. 2021. An integrative review of simulation, senior practicum and readiness for practice. *Nurse Education in Practice*, 55:103087

Rall, M., Manser, T., Howard, S.K. & Gaba, D.M. 2000. Key elements of debriefing for simulator training. *European Journal of Anaesthesiology*, 17(8), pp.516–517.

Raman, S., Arulappan, J., Zaabi, O.A., Hashmi, I.A., Cyril Vincent, S., Raghavan, D. & Panchatcharam, S. 2024. Undergraduate nursing students' attitude and perception toward high-fidelity simulation-based education in a Middle Eastern country. *SAGE Open Nursing*, pp.1-11.

Ramsey, S.M., Brooks, J., Briggs, M. & Hallett, C.E. 2022. Corporatising compassion? A contemporary history study of English NHS Trusts' nursing strategy documents. *Nursing Inquiry*, 29(4), p. e12486.

Rasmussen, P., Henderson, A., McCallum, J. & Andrew, N. 2021. Professional identity in nursing: A mixed method research study. *Nurse Education in Practice*, 52(6), p.103039.

Raso, A., Marchetti, A., D'Angelo, D., Albanesi, B., Garrino, L., Dimonte, V., Piredda, M & De Marinis, M. 2019. The hidden curriculum in nursing education: a scoping study. *Medical Education*, 53(10), pp.989-1002.

Ravanipour, M., Bahreini, M. & Ravanipour, M. 2015. Exploring nursing students' experience of peer learning in clinical practice. *Journal of Education and Health Promotion*, 4, p.46.

Rees, C., 2011. *An introduction to research for midwives*. 3rd ed. Edinburgh: Churchill Livingstone/Elsevier.

Reime, M.H., Johnsgaard, T., Kvam, F.I., Aarflot, M., Engeberg, J.M. & Breivik, M. 2017. Learning by viewing versus learning by doing: a comparative study of observer & participant experiences during an interprofessional simulation training. *Journal of Interprofessional Care*, 31(1), pp.51–58.

Ren, Q., Chen, F., Zhang, H., Tu, J., Xu, X. & Liu, C. 2022. Effects of a standardized patient-based simulation in anaphylactic shock management for new graduate nurses. *BMC Nursing*, 21(1), pp.1-8.

Roberts, D. 2008. Learning in clinical practice: the importance of peers. *Nursing Standard*, 23(12), pp.35-41.

Roberts, D. & Greene, L. 2011. The theatre of high-fidelity simulation education. *Nurse Education Today,* 31(7), pp. 694-698.

Rode, J., Neu, T. & Hammer, S. 2023. Examining nursing students' experiences during COVID-19 through a psychosocial development lens. *Research and Theory for Nursing Practice*, 37(4), pp.423–435.

Rogers, J. 2001. *Adults learning*. 4th ed. Maidenhead: Open University Press.

Rogers, R. & Wetzel, M. 2013. Studying agency in literacy teacher education: a layered approach to positive discourse analysis. *Critical Inquiry in Language Studies*, 10(1), pp.62–92.

Rohatinsky, N., Cave, J. & Krauter, C. 2020. Establishing a mentorship program in rural workplaces: connection, communication, and support required. *Rural and Remote Health*, 20(1), pp.1-9.

Rosenau, P.A., Lisella, R.F., Clancy, T.L. & Nowell, L.S. 2015. Developing future nurse educators through peer mentoring. *Nursing: Research and Reviews*, 5, pp.13-21.

Rosser, E. 2016. Nursing history: from conformity to challenging practice. *British Journal of Nursing*, 25(22), pp.1270–1274.

Royal College of Nursing (RCN). 2017. *Responses to the NMC consultations on: standards of proficiency for registered nurses; education framework: standards for education and training; prescribing and standards for medicine management*. London: RCN. Available at: https://www.rcn.org.uk/-/media/royal-college-of-nursing/documents/policies-and-briefings/consultation-responses/2017/september/conr-33-34-3517.pdf [Accessed 13 June 2023].

Royal College of Nursing (RCN). 2023a. *Royal College of Nursing responds to the latest NHS England Vacancy Statistics*. Available at: https://www.rcn.org.uk/news-and-events/Press-Releases/rcn-responds-to-the-latest-nhs-england-vacancy-statistics-aug2023#:~:text=The%20latest%20NHS%20England%20Vacancy%20statistics%20show%20that,from%20the%20previous%20statistics%20for%202022%2F23%20Q4%20%2840%2C096%29. [Accessed 27 Nov 2023].

Royal College of Nursing (RCN). 2023b. *RCN Wales publishes Nursing in Numbers 2023 report*. Available at: https://www.rcn.org.uk/Professional-Development/publications/rcn-nursing-in-numbers-english-uk-pub-011-188 [Accessed 27 Nov 2023].

Royal College of Nursing (RCN). 2024. *Definition and Principles of Nursing*. London: RCN. Available at: https://www.rcn.org.uk/Professional-Development/Definition-and-Principles-of-Nursing [Accessed 13 Jan 2025].

Royal College of Nursing (RCN). 2024a. *A lost decade: nursing staff demoralised by poor care and low pay*. London: Royal College of Nursing. Available at: https://www.rcn.org.uk/news-and-events/Press-Releases/a-lost-decade-nursing-staff-demoralised-by-poor-care-and-low-pay [Accessed 13 Jan 2025].

Rush, S., Firth, T., Burke, L. & Marks-Maran, D. 2012. Implementation and evaluation of peer assessment of clinical skills for first year student nurses. *Nurse Education in Practice,* 12(4), pp. 219-226

Ruth-Sahd, L.A. 2011. Student nurse dyads create a community of learning: proposing a holistic clinical education theory. *Journal of Advanced Nursing*, 67(11), pp.2445–2454.

Rutherford-Hemming, T. 2012. Learning in simulated environments: effect on learning transfer and clinical skill acquisition in nurse practitioner students. *Journal of Nursing Education*, 51(7), pp.403-406.

Rutherford-Hemming, T., Alfes, C.M. & Breymier, T.L. 2019. A systematic review of the use of standardized patients as a simulation modality in nursing education. *Nursing Education Perspectives*, 40(2), pp.84-90.

Rylance, R., Barrett, J., Sixsmith, P. & Ward, D. 2017. Student nurse mentoring: an evaluative study of the mentor's perspective. British Journal of Nursing, 26(7), pp. 405-409.

S

Saara Kertu, H. & Nuuyoma, V. 2019. Theory-Practice Gap: Challenges Experienced by Nursing Students at the Satellite Campus of a Higher Education Institution in Namibia. *International Journal of Higher Education*, 8(5).

Saarikoski, M. & Leino-Kilpi, H. 2002. The clinical learning environment and supervision by staff nurses: Developing the instrument. *International Journal of Nursing Studies*, 39(3), pp.259–267.

Salje, J. 2024. Cocreation With Prelicensure Nursing Students of a Simulated Practice Placement. *Nurse Educator*, 49(2), pp.E92–E96.

Salisu, W.J., Nayeri, N., Yakubu, I. & Ebrahimpour, F. 2019. Challenges and facilitators of professional socialization: A systematic review. *Nursing Open*, 6(4), pp.1289–1298.

Schon, D.A. 1983. *The reflective practitioner: How professionals think in action*. San Francisco: Jossey-Bass.

Schweller, M., Ribeiro, D.L., Passeri, S.R., Wierley, J.S. & Carvalho-Filho, M.A. 2018. Simulated medical consultations with standardized patients: In-depth debriefing based on dealing with emotions. *Revista Brasileira de Educação Médica*, 42(1), pp.84–93.

Srulovici, E., Azriel, Y., Golfenshtein, N. and Drach-Zahavy, A. 2023. Job crafting strategies of nurse mentors as mentors and nurses and their impact on missed nursing care: a cross-sectional study. *Nurse Education Today*, 127, p.105844.

Setati, C.M. & Nkosi, Z.Z. 2017. The perceptions of professional nurses on student mentorship in clinical areas: A study in Polokwane municipality hospitals, Limpopo province. *Health SA Gesondheid*, 22, pp.130–137.

Shankar, P.R. & Dwivedi, N.R. 2016. Standardized Patient's Views About their Role in the Teaching-Learning Process of Undergraduate Basic Science Medical Students. *J Clin Diagn Res*, 10(6), pp.JC01–05.

Sherman, J., Kalvas, L.B. & Schlegel, E.C. 2023. Navigating the turbulent seas: Experiences of peer mentorship on the journey to becoming a nurse scholar. *Nurse Education Today*, 121: 105694

Shin, H., Park, J.H. & Kim, J.H. 2015. The effect of simulation courseware on critical thinking in undergraduate nursing students: multi-site pre-post study. *Nurse Education Today*, 35(4), pp.537–542.

Siedlecki, S.L. 2020. Case study research design in nursing. *Clinical Nurse Specialist*, 34(6), pp.250–256.

Silverman, D. 2010. *Doing qualitative research: a practical handbook*. 3rd ed. London: SAGE.

Smith, A., Beattie, M. & Kyle, R.G. 2015. Stepping up, stepping back, stepping forward: Student nurses' experiences as peer mentors in a pre-nursing scholarship. *Nurse Education in Practice*, 15(6), pp.492–497.

Smith, A., McConnell, L., Iyer, P., Allman-Farinelli, M. & Chen, J. 2024. Co-designing assessment tasks with students in tertiary education: a scoping review of the literature. *Assessment and Evaluation in Higher Education*, pp.1–20.

Smith, L.S. & Coleman, V. 2008. Student nurse transition from traditional to problem-based learning. *Learning in Health and Social Care*, 7(2), pp.114–123.

Smith, T.A., Perez, J.K. & Friesen, M.A. 2022. Virtual Focus Groups as an Answer to Research During a Pandemic: Implications for Nursing Professional Development. *Journal for Nurses in Professional Development*, 38(5), pp.279–286.

Simons, H. 2009. *Case study research in practice*. Los Angeles; London: SAGE.

Soerensen, J., Nielsen, D.S. & Pihl, G.T. 2023. It's a hard process - Nursing students' lived experiences leading to dropping out of their education; a qualitative study. *Nurse Education Today*, 122:105724.

Socco, D.A. 2017. Effectiveness of Mental Health Simulation in Replacing Traditional Clinical Hours in Baccalaureate Nursing Education. *Journal of Psychosocial Nursing and Mental Health Services*, 55(11), pp.36–43.

Society for Simulation in Healthcare. 2025. Healthcare simulation safety guidelines. SSH. Available at: https://www.biomedsimulation.com/wp-content/uploads/2025/02/SSH-Guidelines-for-Simulation-Training.pdf (Accessed: 2 Feb 2025).

Somerville, S. G., Harrison, N. M., & Lewis, S. A. (2023). Twelve tips for the pre-brief

to promote psychological safety in simulation-based education. Medical Teacher, 45 (12), 1349–1356.

Srulovici, E., Azriel, Y., Golfenshtein, N. & Drach-Zahavy, A. 2023. Job crafting strategies of nurse mentors as mentors and nurses and their impact on missed nursing care: A cross-sectional study. *Nurse Education Today*, 127: 105844

Stake, R. 1995. *The Art of Case Study Research*. Thousand Oaks, CA: Sage Publications, Inc.

Steivy, U., Tiwaken, L.C.C. & David, J.J.T. 2015. The Real World: Lived Experiences of Student Nurses during Clinical Practice. *International Journal of Nursing Science*, 5(1), pp.66–75.

Stevenson, K.R. & Grayling, I. 2006. Inter-group conflict in health care: UK students' experiences of bullying and the need for organisational solutions. *Online Journal of Issues in Nursing*, 11(2).

Stienaker, L. & Bell, C. 1979. *Developing professional knowledge and competence*. San Francisco: Jossey-Bass.

Stone, R., Cooper, S. & Cant, R. 2013. The value of peer learning in undergraduate nursing education: a systematic review. *ISRN Nursing*, 2013, p.930901.

Stroup, C. 2014. Simulation Usage in Nursing Fundamentals: Integrative Literature Review. *Clinical Simulation in Nursing*, 10(3), pp.e155–e164.

Su, Q., Wu, Y., Yun, B., Zhang, H., She, D. & Han, L. 2023. The mediating effect of clinical teaching behaviour on transition shock and career identity among new nurses: A cross-sectional study. *Nurse Education Today*, 125, p.105780.

Sun, L., Gao, Y., Yang, J., Zang, X.-Y. & Wang, Y.-G. 2016. The impact of professional identity on role stress in nursing students: A cross-sectional study. *International Journal of Nursing Studies*, 63, pp.1–8.

Suplee, P.D., Jerome-D'Emilia, B. & Linz, S. 2022. The lived experiences of new nurses during the COVID-19 pandemic and their contributions to nursing education and professional development. *Journal of Continuing Education in Nursing*, 53(10), pp.451–459.

T

Talisse, R.B. and Aikin, S.F. 2008. *Pragmatism: A Guide for the Perplexed*. London: Continuum.

Terry, D. R., Nguyen, H., Peck, B,. Smith, A. & Phan, H. 2020. Communities of practice: A systematic review and meta-synthesis of what it means and how it really works among nursing students and novices. *Journal of Clinical Nursing.* 29(3/4): pp. 370-380.

The Health Foundation. 2018. *The healthcare workforce in England: Make or break?* London: The Health Foundation. Available at: https://www.health.org.uk/reports-and-analysis/briefings/the-health-care-workforce-in-england (Accessed: 23 April 2022).

Theobald, K.A., Tutticci, N., Ramsbotham, J. & Johnston, S. 2021. Effectiveness of using simulation in the development of clinical reasoning in undergraduate nursing students: A systematic review. *Nurse Education in Practice*, 57:103220

Thomas, G. 2011. A typology for the case study in social science following a review of definition, discourse, and structure. *Qualitative Inquiry* 17(6): 511-521.

Thomas, L. 2012. *Building student engagement and belonging in higher education at a time of change: final report from the What Works? Student Retention and Success programme*. York: Higher Education Academy.

Thomas, J., Jinks, A. & Jack, B. 2015. Finessing incivility: The professional socialisation experiences of student nurses' first clinical placement, a grounded theory. *Nurse Education Today*, 35(12), pp. e4–e9.

Thomas, L.J. & Asselin, M. 2018. Promoting resilience among nursing students in clinical education. *Nurse Education in Practice*, 28, pp. 231–234.

Thomas, J., Jack, B.A. & Jinks, A.M. 2012a. Resilience to care: a systematic review and meta-synthesis of the qualitative literature concerning the experiences of student nurses in adult hospital settings in the UK. *Nurse Education Today*, 32(6), pp. 657–664.

Thomas, G. 2021. *How to do your case study*. 3rd ed. London: SAGE Publications.

Thompson, P.E. 2016. New generation leaders: the future for nursing and midwifery. *Journal of Nursing Management*, 24(3), pp.273–274.

Tiersma, K., Reichman, M., Popak, P., Nelson, Z., Barry, M., Elwy, A., Flores, E., Irwin, K. & Vranceanu, A. 2022. The strategies for quantitative and qualitative remote data collection: Lessons from the COVID-19 pandemic. *JMIR Formative Research*, 6(4), p.e30055.

Topping, K.J. 2005. Trends in peer learning. *Educational Psychology*, 25(6), pp.631-645.

Tornwall, J. 2018. Peer assessment practices in nurse education: An integrative review. *Nurse Education Today*, 71, pp.266-275.

Trowler, P. 2015. *Ten key components of doctoral research: maximizing alignment and significance*. CreateSpace Independent Publishing Platform.

Tuomikoski, A.-M., Ruotsalainen, H., Mikkonen, K. & Kääriäinen, M. 2020. Nurses' experiences of their competence at mentoring nursing students during clinical practice: A systematic review of qualitative studies. *Nurse Education Today*, 85:104258

Turner, S. & Harder, N. 2018. Psychological Safe Environment: A Concept Analysis. *Clinical Simulation in Nursing*, 18, pp.47-55.

Tuttle, N. & Horan, S.A. 2019. The effect of replacing 1 week of content teaching with an intensive simulation-based learning activity on physiotherapy student clinical placement performance. *Advances in Simulation (London)*, 4 (Suppl 1), p.14.

Tuzer, H., Dinc, L. & Elcin, M. 2016. The effects of using high-fidelity simulators and standardized patients on the thorax, lung, and cardiac examination skills of undergraduate nursing students. *Nurse Education Today*, 45, pp.120-125.

Twigg, D.E., Whitehead, L., Doleman, G. & El-Zaemey, S. 2021. The impact of nurse staffing methodologies on nurse and patient outcomes: A systematic review. *Journal of Advanced Nursing*, 77(12), pp.4599-4611.

Tyng, C.M., Amin, H.U., Saad, M.N.M. & Malik, A.S. 2017. The influences of emotion on learning and memory. *Frontiers in Psychology*, 8, p.1454.

U

United Kingdom Central Council for Nursing, Midwifery and Health Visiting (UKCC), 1986. *Project 2000: A new preparation for practice*. London: UKCC.

United Kingdom (UK) Parliament. 2024. *The NHS workforce in England*. [online] Available at: https://commonslibrary.parliament.uk/research-briefings/cbp-9731/ [Accessed 19 Jan. 2025].

Uslu, Y. & Van Giersbergen, M.Y. 2023. The effects of manikin-based and standardized-patient simulation on clinical outcomes: A randomized prospective study. *Cyprus Journal of Medical Sciences*, 8(4), pp.271–275.

V

Vågal, N., Leung, K., Sanzone, L., Filion, F., Tsimicalis, A. & Lang, A. 2018. Exploring the student peer mentor's experience in a nursing peer mentorship program. *Journal of Nursing Education*, 57(7), pp.422–425.

Vangone, I., Tripepi, G., Borrelli, G., Provenzano, S., Catania, G. & Alvaro, R. 2024. The efficacy of high-fidelity simulation on knowledge and performance in undergraduate nursing students: An umbrella review of systematic reviews and meta-analysis. *Nurse Education Today*, 139:106231

Valler-Jones, T. 2014. The impact of peer-led simulations on student nurses. *British Journal of Nursing*, 23(6), pp.321–326.

van Dyk, E.C., van Rensburg, G.H. & Janse van Rensburg, E.S. 2022. The educator as facilitator of trust in the nursing education environment. *PLoS One*, 17(8), p.e0266240.

Verkuyl, M., Lapum, J.L., St-Amant, O., Hughes, M., Romaniuk, D. & McCulloch, T. 2020. Exploring debriefing combinations after a virtual simulation. *Clinical Simulation in Nursing*, 40, pp.36–42.

Vinson, D., Nixon, S., Walsh, B., Walker, C., Mitchell, E. & Zaitseva, E. 2010. Investigating the relationship between student engagement and transition. *Active Learning in Higher Education*, 11(2), pp.131–143.

Visiers-Jiménez, L., Alanen, S., Casafont, C., Solà-Martí, T., Gómez-Ibáñez, R., Balasch-Bernat, M., Vizcaya-Moreno, M.F., Roca, J. & Mikkonen, K. 2021. Clinical learning environment and graduating nursing students' competence: A multi-country cross-sectional study. *Nursing and Health Sciences*, 23(2), pp.398–410.

Vygotsky, L.S. 1978. *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

W

Walker, S., Dwyer, T., Broadbent, M., Moxham, L., Sander, T. & Edwards, K. 2015. Constructing a nursing identity within the clinical environment: The student nurse experience. *Contemporary Nurse*, 49(1), pp.103–112.

Wang, Q., Cao, X. & Du, T. 2022. First-year nursing students' initial contact with the clinical learning environment: Impacts on their empathy levels and perceptions of professional identity. *BMC Nursing*, 21(1), pp.1–9.

Wang, Y., Hu, S., Yao, J., Pan, Y., Wang, J. & Wang, H. 2024. Clinical nursing mentors' motivation, attitude, and practice for mentoring and factors associated with them. *BMC Nursing*, 23(1), pp.1–15.

Warne, T., Johansson, U.B., Papastavrou, E., Tichelaar, E., Tomietto, M., Van den Bossche, K., Moreno, M.F.V., Saarikoski, M. & Strandell-Laine, C. 2010. An exploration of the clinical learning experience of nursing students in nine European countries. *Nurse Education Today*, 30(8), pp.809–815.

Warrender, D. 2022. Though noble, NMC's standards are an assault on mental health nursing. *Mental Health Practice*, 25(6), p.5.

Weeks, K., Herron, E. & Buchanan, H. 2024. Aligning simulation-based education with didactic learning in prelicensure baccalaureate nursing education. *Nurse Educator*, 49(3), pp.125–129.

Weerasekara, I., Hall, M., Shaw, L. & Kiegaldie, D. 2023. Instruments evaluating the quality of the clinical learning environment in nursing education: An updated systematic review. *Nurse Education in Practice*, 71:103732.

Welsh Government, 2016. *Nurse Staffing Levels (Wales) Act 2016: Statutory Guidance*. [online] Available at: https://www.gov.wales/sites/default/files/publications/2019-04/nurse-staffing-levels-wales-act-2016.pdf [Accessed 23 April 2023].

Welsh Government, 2022. *NHS vacancy statistics: on 31 December 2022*. [online] Available at: https://gov.wales/nhs-vacancy-statistics-31-december-2022 [Accessed 23 April 2023].

Weidman, J.C. 2001. Socialization of students in higher education: A conceptual framework. In: J.C. Smart, ed. *Higher Education: Handbook of Theory and Research*. Vol. 16. Dordrecht: Springer, pp.289–322.

Weidman, J.C. 2010. *Socialization of graduate and professional students in higher education: A perilous passage*. ASHE Higher Education Report, 36(5). San Francisco: Jossey-Bass.

Weidman, J.C. & DeAngelo, L. 2020. *Socialization in higher education and the early career: Theory, research and application*. Cham, Switzerland: Springer.

Whaley, V., Hay, J. & Knight, K.H. 2023. Preparing nurse educators for NMC standards for student supervision and assessment: The impact 4 years on. *British Journal of Nursing*, 32(3), pp.140–144.

Whitaker, E.M. & Atkinson, P. 2021. *Reflexivity in social research*. 1st ed. Cham: Springer International Publishing

Williams, B. & Reddy, P. 2016. Does peer-assisted learning improve academic performance? A scoping review. *Nurse Education Today*, 42, pp.23–29.

Williams, J., Murphy, M. & Garrow, A. 2022. Development of a simulation placement in a pre-registration nursing programme. *British Journal of Nursing*, 31(10), pp.549–554.

Wong, B.S.H. & Shorey, S. 2022. Nursing students' experiences and perception of peer feedback: A qualitative systematic review. *Nurse Education Today*, 116: =105469

Wotton, K., Davis, J., Button, D. & Kelton, M. 2010. Third-year undergraduate nursing students' perceptions of high-fidelity simulation. *Journal of Nurse Education*, 49(11), pp.632–639.

Wu, C., Palmer, M.H. & Sha, K. 2020. Professional identity and its influencing factors of first-year post-associate degree baccalaureate nursing students: A cross-sectional study. *Nurse Education Today*, 84: 104227.

Y

Yarbrough, A. & Phillips, L.K. 2022. Peer mentoring in nursing education: A concept analysis. *Nursing Forum*, 57(6), pp.1545–1550.

Yang, M.M., Golden, B.P. Cameron, K.A., Gard, L., Bierman, J.A., Evans, D.B. & Henschen, B.L., 2022. Learning through teaching: Peer teaching and mentoring experiences among third-year medical students. *Teaching and Learning in Medicine*, 34(4), pp.360–367.

Yazan, B. 2015. Three approaches to case study methods in education: Yin, Merriam, and Stake. *The Qualitative Report*, 20(2), pp.134–152.

Yin, R.K. 2018. *Case study research and applications: Design and methods*. 6th ed. Los Angeles: SAGE Publications.

Z

Zentz, S.E., Kurtz, C.P. & Alverson, E.M. 2014. Undergraduate peer-assisted learning in the clinical setting. *Journal of Nursing Education*, 53(3S), pp.S4–S10.

Zhang, J. & Cui, Q. 2018. Collaborative learning in higher nursing education: A systematic review. *Journal of Professional Nursing*, 34(5), pp.378–388.

Zigmont, J.J., Kappus, L.J. & Sudikoff, S.N. 2011. The 3D model of debriefing: Defusing, discovering, and deepening. *Seminars in Perinatology*, 35(2), pp.52–58.

Appendices

Appendix 1: Literature Search

Electronic Databases Searched
Educational Resource Information Centre (ERIC)
Science Direct
Cumulative Index to Nursing and Allied Health (CINAHL)
PubMed
British Nursing Index
Scopus

Search Terms	
Professional Values	‘professional values’ ‘nursing values’ ‘ethical values’ values-based practice
Professional Identity	‘professional identity’ ‘professional identity formation’ ‘professional identity development’ ‘nurs* identity construction’ ‘nurs* identity formation’ ‘professional self-concept’
Professional Socialisation	‘professional socialisation’ ‘professional socialization’ ‘nurs* socialisation’ ‘nurs* socialization’ ‘student socialisation’ ‘student socialization’ ‘undergraduate socialisation’ ‘undergraduate socialization’
Mentor	mentor mentorship mentoring ‘clinical mentor’ ‘practice mentor’ ‘nurs* mentor’ guide

Simulation-Based Learning	‘simulation-based learning’ ‘simulation-based education’ ‘clinical simulation’ ‘healthcare simulation’ ‘undergraduate simulation’ ‘student simulation’ ‘nurs* simulation’
Near-Peer Learning	‘near-peer learning’ ‘near-peer teaching’ ‘near-peer education’ ‘near-peer mentoring’ ‘peer learning’ ‘peer-assisted learning’ ‘peer teaching’ ‘peer mentoring’

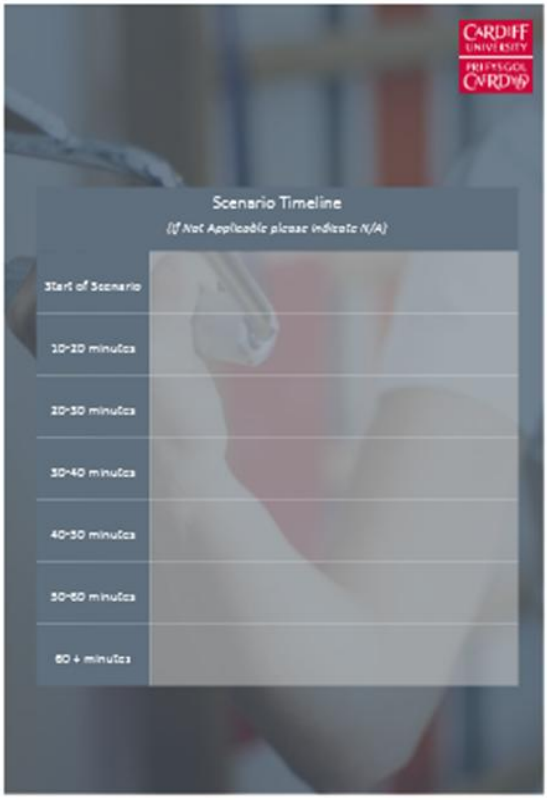
Appendix 2: Theoretical and Practice Content of Junior Students Programme Prior to Simulation

Theoretical Content		
Effective Communication	**Professionalism and the NMC Code**	**Person Centred Care**
• Communication Models • EGANS SOLER • Active Listening • 'Hello my name is' • Body language • Building relationships	• Professionalism • Accountability • Person Centred Care • Holistic Care	• Holistic Care • Holistic assessment • Holistic approaches e.g. mindfulness • Culture • Spiritual
Fundamental Care	**Infection Control**	**Complications of Bed Rest**
• Assisting with Eating and Drinking • Assisting with Hygiene • Assisting with Elimination Needs • Dignity and Respect • Ensuring Safety • Oral Health	• Hand Hygiene • Standard Precautions • Chain of Infection • PPE	• Staying active • Inappropriate bed rest • Deconditioning • Pressure sore prevention and assessment • Constipation • Preventing DVT's
Ethical Issues in Nursing	**Nursing and the Law**	**Mandatory Training**
• Moral judgements • Autonomy • Beneficence • Non-Maleficence • Justice	• Accountability • Mental Health Act • Mental Capacity • Human Rights • Consent	• Equality and Diversity • Health and Safety • Safeguarding
Care of the Surgical Patient	**Care of the Older Person**	**Principles of Medication Management**
• Pre Op • Post op	• Frailty • Effects of aging – Cardio etc • Depression/loneliness • Dignity	• Define, discuss and describe medicines management. • Legal, professional, ethical and organisational factors of medicines management • Different routes and types of medicines • The qualified nurse's role in medicines administration • The student nurse's role in medicines administration and understand the boundaries • 9 Rights of medicines administration
Record Keeping	**Assessment Tools**	**Care Planning**
• Tools, policies, procedures, applications/solutions • Patient records and streamlined workflows to deliver improved care for patients	• Integrated Assessment • Risk Assessment • Nutritional Screening (WAASP) • NEWS	• Identifying the professional, legal and ethical requirements of planning care. • Principles of effective care planning. • The care planning process. • SMART objectives.

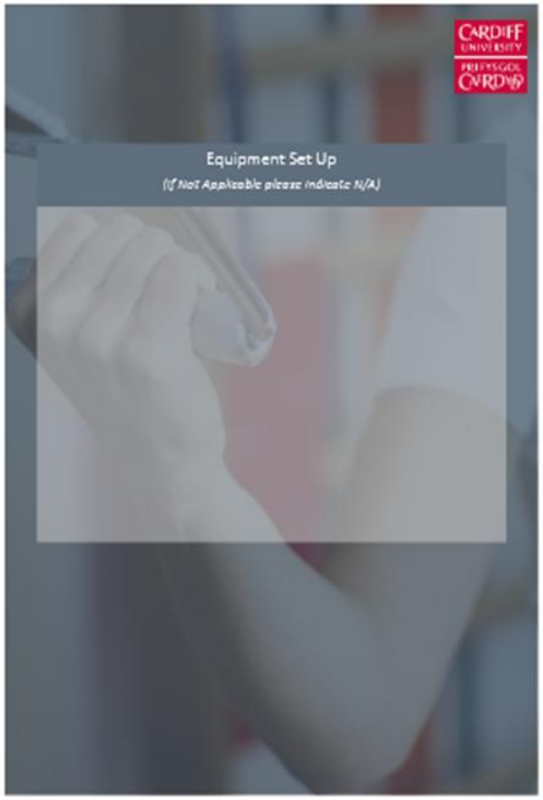
Activities of Daily Living	Death and Dying
• Ropers Model	• Self-care and resilience • Advanced care planning • Discussing with patients • Role of first year students

Practical Content		
Vital Signs	**ANTT**	**Wound Dressings**
• BP • Pulse • Respirations • Temperature • O2 Sats • NEWS	• Hand hygiene & Personal protective equipment • Preparation of Trolley & Collection of equipment • Demonstration of how to open the dressing pack and change dressing • Disposal	• To develop clinical skill when performing a wound dressing • To be able to demonstrate principles of ANTT through simulation (wound dressing) and discuss nursing care issues
Injection Technique	**BLS**	**Moving and Handling**
• Identify the various types of injection and the equipment used in administering injections • To develop clinical skill around various injection techniques and application of Aseptic Non-Touch Technique (ANTT) principles • IM Injections • SC Injections	• Basic BLS	• All Wales Passport

Appendix 3: Scenario Template




Facilitator Roles
(If Not Applicable please indicate N/A)


Equipment Set Up
(If Not Applicable please indicate N/A)

Appendix 4: Co-Design Presentation

Co-Design Guiding Principles

Andrew Santos
School Healthcare Sciences

Data Collection

- All information collected about you during the research will be kept confidential and any personal information you provide will be managed in accordance with data protection legislation.
- You will be assigned a research identification number to support anonymity thus audio and video data will be anonymised on transcription

Session Directions

- I will facilitate the session however I will not be involved in decisions regarding the scenarios
- Outside/Insider role of researcher – reflective journal
- Adult Nursing Students
- Adult Nursing Lecturers
- Clinical Skills Tutors
- Simulation Team
- Important that everyone is heard so please share experiences and opinions

Research Title

An investigation into the effect of peer learning through simulated based activities on the development of adult nursing student's professional socialisation.

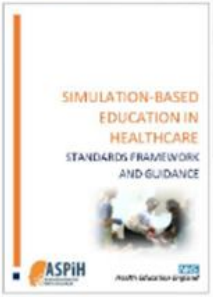
What is Simulation?

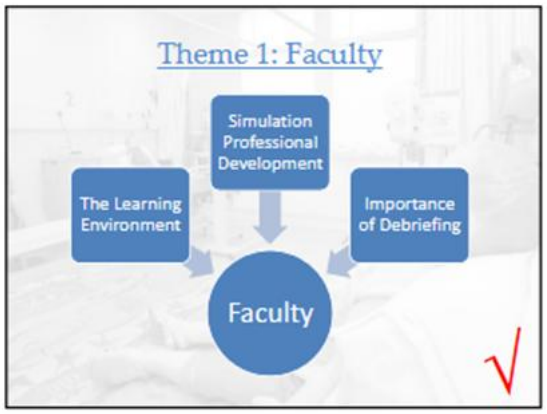
"" ...technique, not a technology, to replace or amplify real experiences with guided experiences, often immersive in nature, that evoke or replicate substantial aspects of the real world in a fully interactive fashion"

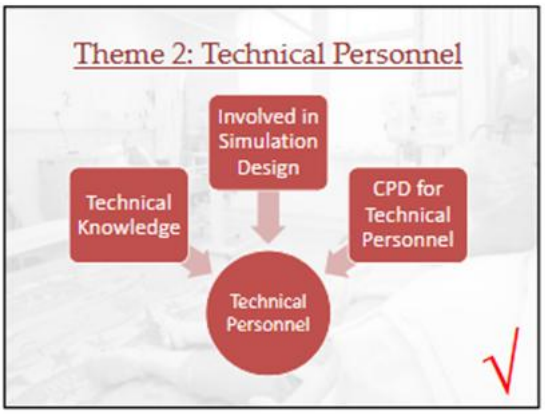
Gaba (2004)

Guiding Principles

- Result of a 2 year programme to develop National Standards
- The framework of 5 key themes describes the attributes required to design and deliver effective simulation-based education.
- Provides a clear focus on improving quality







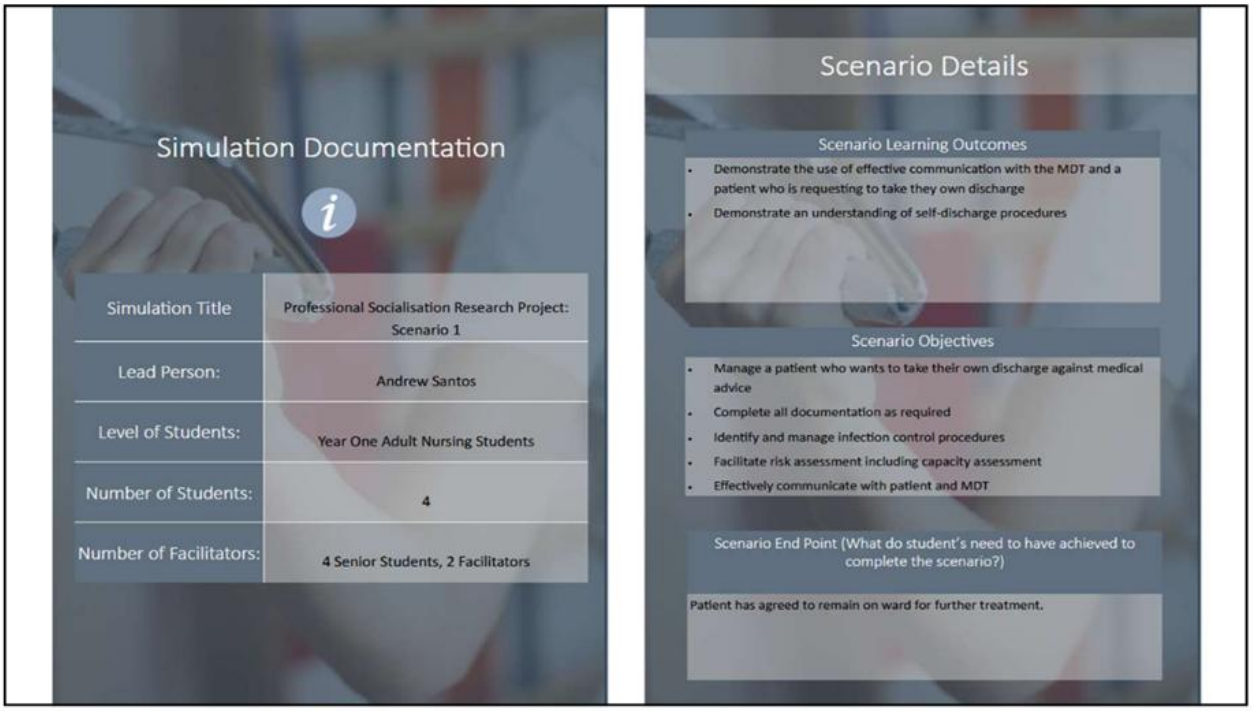
Guiding Principles

- Education goals and objectives
  - S-specific
  - M-measurable
  - A-achievable
  - R-relevant
  - T-timely
- Intended outcome
- Critical actions checklist
- Simulation equipment required
- Pre-brief

Building/Layering the Scenario

Thank you for listening
Over to you

Appendix 5: Simulation Scenarios



Simulation Documentation

Simulation Title	Professional Socialisation Research Project: Scenario 1
Lead Person:	Andrew Santos
Level of Students:	Year One Adult Nursing Students
Number of Students:	4
Number of Facilitators:	4 Senior Students, 2 Facilitators

Scenario Details

Scenario Learning Outcomes

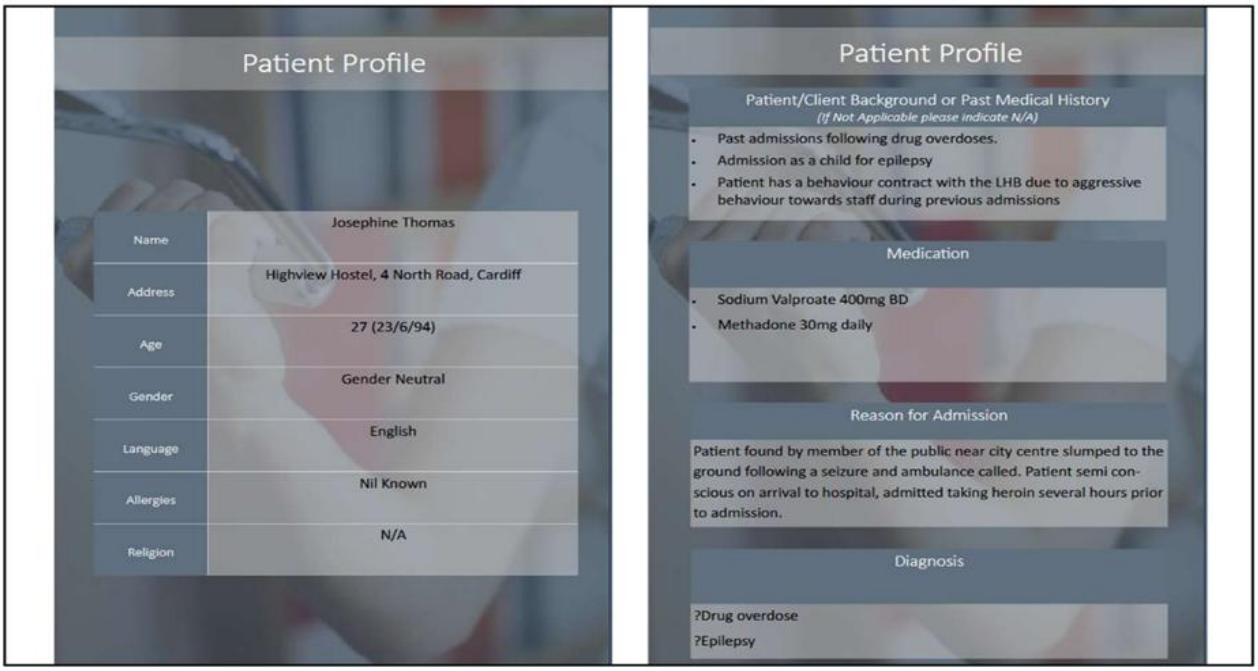
- Demonstrate the use of effective communication with the MDT and a patient who is requesting to take they own discharge
- Demonstrate an understanding of self-discharge procedures

Scenario Objectives

- Manage a patient who wants to take their own discharge against medical advice
- Complete all documentation as required
- Identify and manage infection control procedures
- Facilitate risk assessment including capacity assessment
- Effectively communicate with patient and MDT

Scenario End Point (What do student's need to have achieved to complete the scenario?)

Patient has agreed to remain on ward for further treatment.



Patient Profile

Name	Josephine Thomas
Address	Highview Hostel, 4 North Road, Cardiff
Age	27 (23/6/94)
Gender	Gender Neutral
Language	English
Allergies	Nil Known
Religion	N/A

Patient Profile

Patient/Client Background or Past Medical History
(If Not Applicable please indicate N/A)

- Past admissions following drug overdoses.
- Admission as a child for epilepsy
- Patient has a behaviour contract with the LHB due to aggressive behaviour towards staff during previous admissions

Medication

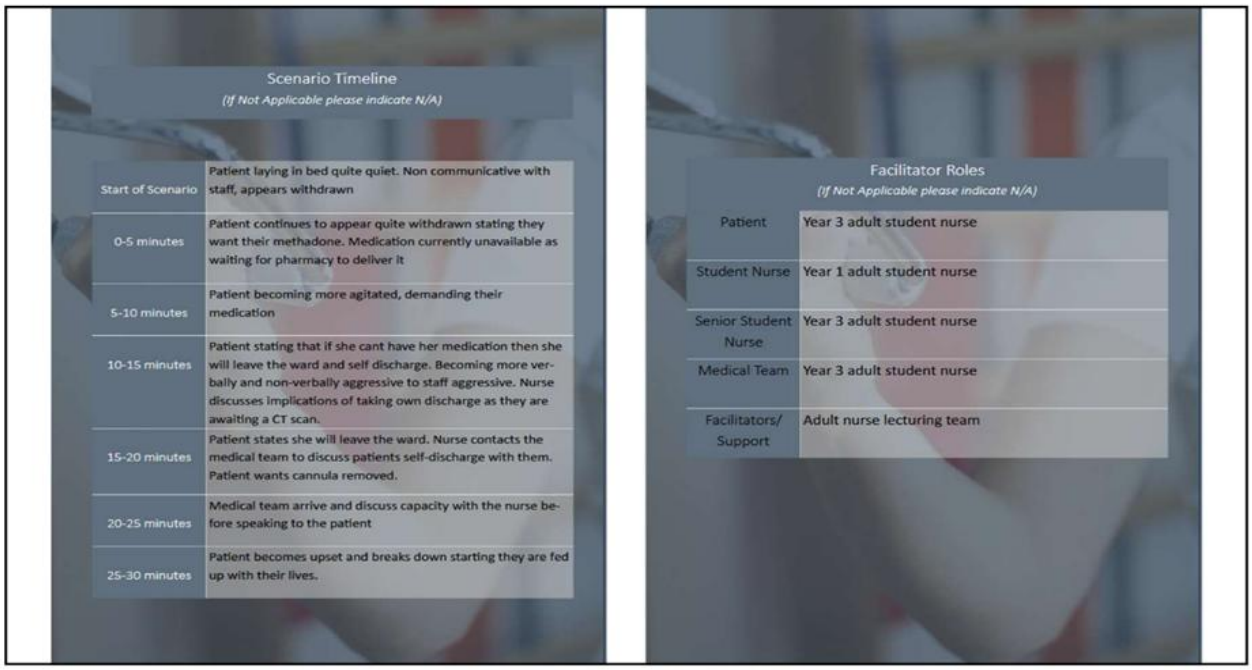
- Sodium Valproate 400mg BD
- Methadone 30mg daily

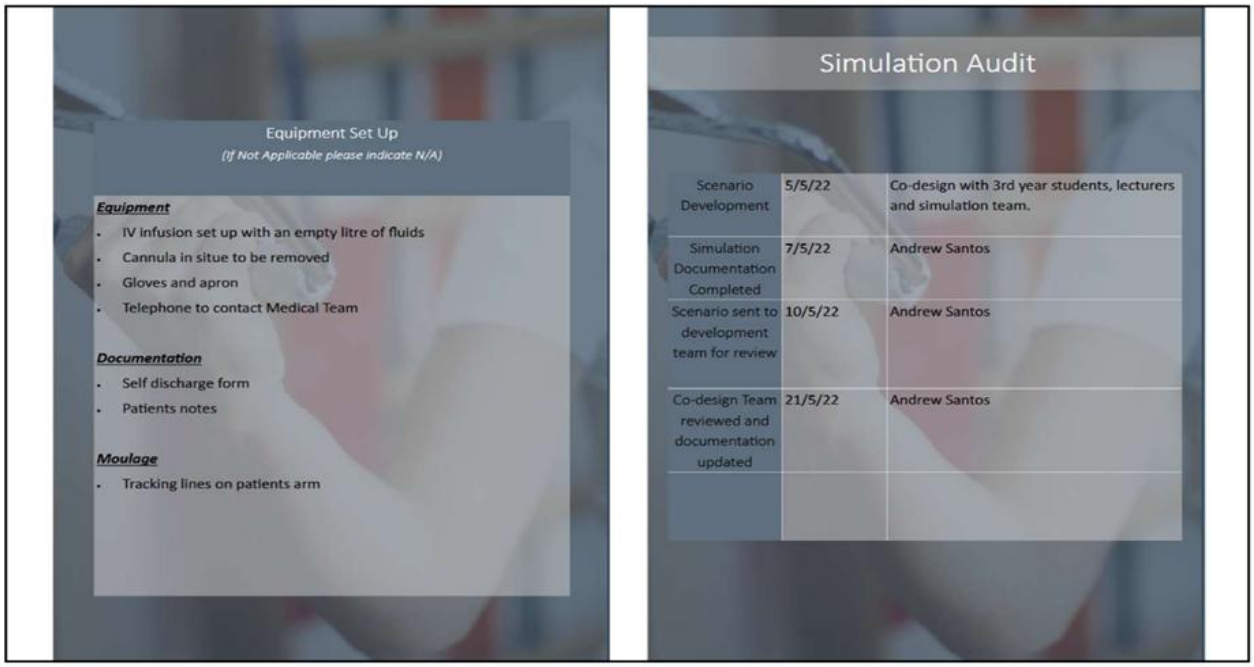
Reason for Admission

Patient found by member of the public near city centre slumped to the ground following a seizure and ambulance called. Patient semi conscious on arrival to hospital, admitted taking heroin several hours prior to admission.

Diagnosis

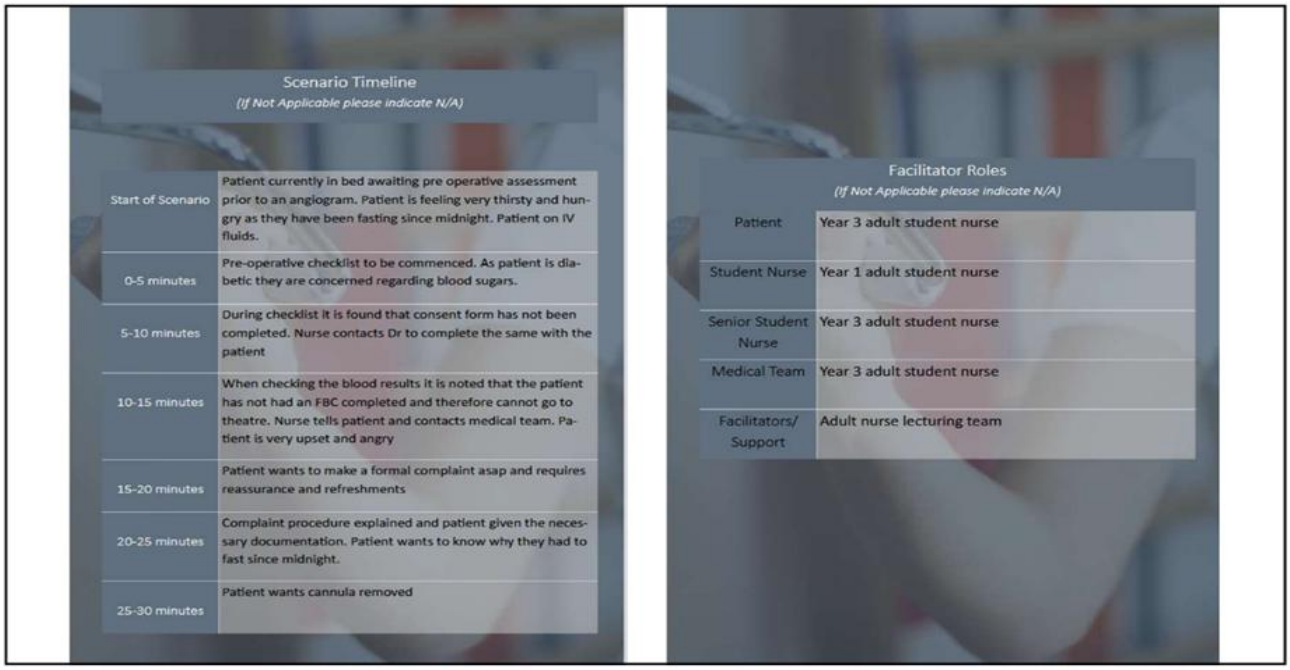
?Drug overdose
?Epilepsy


Scenario Timeline
(If Not Applicable please indicate N/A)
Start of Scenario
Patient laying in bed quite quiet. Non communicative with staff, appears withdrawn
0-5 minutes
Patient continues to appear quite withdrawn stating they want their methadone. Medication currently unavailable as waiting for pharmacy to deliver it
5-10 minutes
Patient becoming more agitated, demanding their medication
10-15 minutes
Patient stating that if she cant have her medication then she will leave the ward and self discharge. Becoming more verbally and non-verbally aggressive to staff aggressive. Nurse discusses implications of taking own discharge as they are awaiting a CT scan.
15-20 minutes
Patient states she will leave the ward. Nurse contacts the medical team to discuss patients self-discharge with them. Patient wants cannula removed.
20-25 minutes
Medical team arrive and discuss capacity with the nurse before speaking to the patient
25-30 minutes
Patient becomes upset and breaks down starting they are fed up with their lives.
Facilitator Roles
(If Not Applicable please indicate N/A)
Patient
Year 3 adult student nurse
Student Nurse
Year 1 adult student nurse
Senior Student Nurse
Year 3 adult student nurse
Medical Team
Year 3 adult student nurse
Facilitators/ Support
Adult nurse lecturing team


Equipment Set Up
(If Not Applicable please indicate N/A)
Equipment
IV infusion set up with an empty litre of fluids
Cannula in situe to be removed
Gloves and apron
Telephone to contact Medical Team
Documentation
Self discharge form
Patients notes
Moulage
Tracking lines on patients arm
Simulation Audit
Scenario Development
5/5/22
Co-design with 3rd year students, lecturers and simulation team.
Simulation Documentation Completed
7/5/22
Andrew Santos
Scenario sent to development team for review
10/5/22
Andrew Santos
Co-design Team reviewed and documentation updated
21/5/22
Andrew Santos


Simulation Documentation
Simulation Title
Professional Socialisation Research Project: Scenario 2
Lead Person:
Andrew Santos
Level of Students:
Year One Adult Nursing Students
Number of Students:
4
Number of Facilitators:
4 Senior Students, 2 Facilitators
Scenario Details
Scenario Learning Outcomes
Student will demonstrate effective management and documentation of the patients complaint procedure
Student will complete a pre-operative checklist with the support of a senior student
Scenario Objectives
Undertake a pre-operative checklist
Effectively communicate with patient and MDT
Manage a complaint
Removed a patients cannula using ANTT
Scenario End Point (What do student's need to have achieved to complete the scenario?)
Patient understands the complaint procedure and has been provided with the necessary documentation.


Patient Profile
Name
Susan Roberts
Address
32 Heol-y-afon, Caerphilly
Age
30 (2/10/22)
Gender
Female
Language
English
Allergies
Nil Known
Religion
Baptist
Patient Profile
Patient/Client Background or Past Medical History
(If Not Applicable please indicate N/A)
Past gastric band surgery which was unsuccessful
NIDDM
Renal Stent
Hypertension
Medication
Metformin 500mg TDS
Aspirin 75mg OD
Enoxaparin S/C 40mg OD
Ramipril 5mg OD
Furosemide 40mg OD
Reason for Admission
Patient has been admitted for investigations following chest discomfort and a history of hypertension. Patient is on the list for an angiogram
Diagnosis
?Angina
Investigations for Hypertension



Scenario Timeline

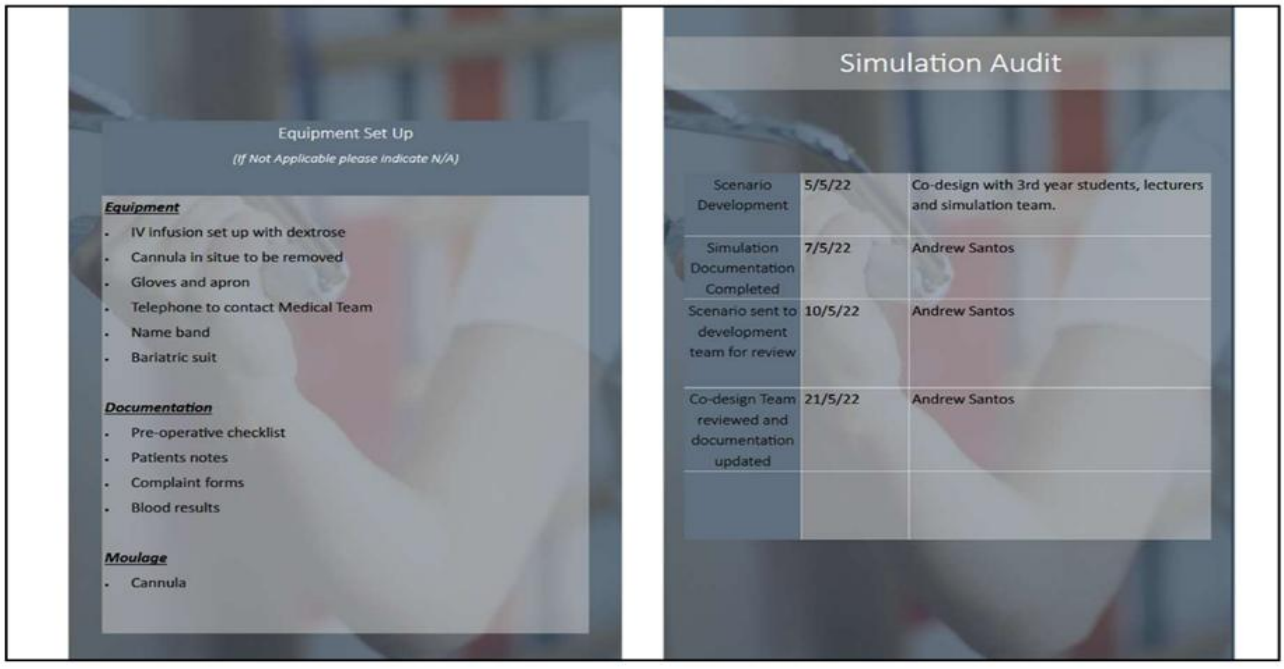
(If Not Applicable please indicate N/A)

Start of Scenario	Patient currently in bed awaiting pre operative assessment prior to an angiogram. Patient is feeling very thirsty and hungry as they have been fasting since midnight. Patient on IV fluids.
0-5 minutes	Pre-operative checklist to be commenced. As patient is diabetic they are concerned regarding blood sugars.
5-10 minutes	During checklist it is found that consent form has not been completed. Nurse contacts Dr to complete the same with the patient
10-15 minutes	When checking the blood results it is noted that the patient has not had an FBC completed and therefore cannot go to theatre. Nurse tells patient and contacts medical team. Patient is very upset and angry
15-20 minutes	Patient wants to make a formal complaint asap and requires reassurance and refreshments
20-25 minutes	Complaint procedure explained and patient given the necessary documentation. Patient wants to know why they had to fast since midnight.
25-30 minutes	Patient wants cannula removed

Facilitator Roles

(If Not Applicable please indicate N/A)

Patient	Year 3 adult student nurse
Student Nurse	Year 1 adult student nurse
Senior Student Nurse	Year 3 adult student nurse
Medical Team	Year 3 adult student nurse
Facilitators/ Support	Adult nurse lecturing team



Equipment Set Up

(If Not Applicable please indicate N/A)

Equipment

- IV infusion set up with dextrose
- Cannula in situe to be removed
- Gloves and apron
- Telephone to contact Medical Team
- Name band
- Bariatric suit

Documentation

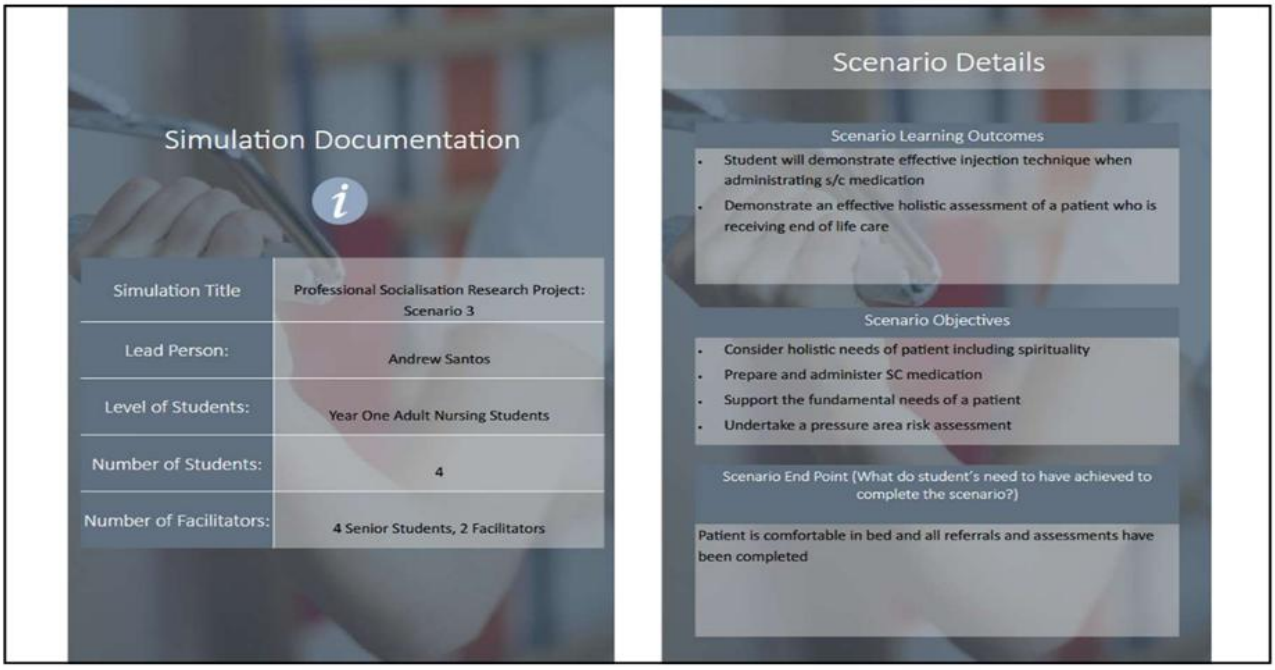
- Pre-operative checklist
- Patients notes
- Complaint forms
- Blood results

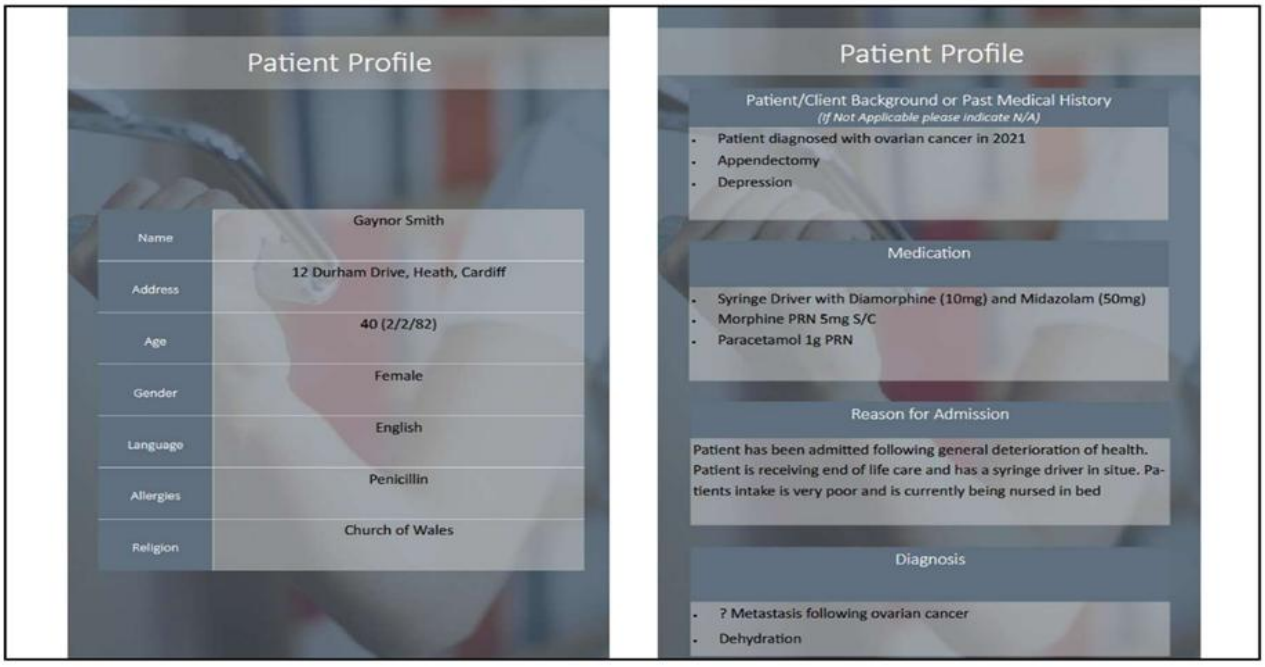
Moulage

- Cannula

Simulation Audit

Scenario Development	5/5/22	Co-design with 3rd year students, lecturers and simulation team.
Simulation Documentation Completed	7/5/22	Andrew Santos
Scenario sent to development team for review	10/5/22	Andrew Santos
Co-design Team reviewed and documentation updated	21/5/22	Andrew Santos


Simulation Documentation
Simulation Title
Professional Socialisation Research Project: Scenario 3
Lead Person:
Andrew Santos
Level of Students:
Year One Adult Nursing Students
Number of Students:
4
Number of Facilitators:
4 Senior Students, 2 Facilitators
Scenario Details
Scenario Learning Outcomes
Student will demonstrate effective injection technique when administrating s/c medication
Demonstrate an effective holistic assessment of a patient who is receiving end of life care
Scenario Objectives
Consider holistic needs of patient including spirituality
Prepare and administer SC medication
Support the fundamental needs of a patient
Undertake a pressure area risk assessment
Scenario End Point (What do student's need to have achieved to complete the scenario?)
Patient is comfortable in bed and all referrals and assessments have been completed


Patient Profile
Name
Gaynor Smith
Address
12 Durham Drive, Heath, Cardiff
Age
40 (2/2/82)
Gender
Female
Language
English
Allergies
Penicillin
Religion
Church of Wales
Patient Profile
Patient/Client Background or Past Medical History
(If Not Applicable please indicate N/A)
Patient diagnosed with ovarian cancer in 2021
Appendectomy
Depression
Medication
Syringe Driver with Diamorphine (10mg) and Midazolam (50mg)
Morphine PRN 5mg S/C
Paracetamol 1g PRN
Reason for Admission
Patient has been admitted following general deterioration of health. Patient is receiving end of life care and has a syringe driver in situe. Patients intake is very poor and is currently being nursed in bed
Diagnosis
? Metastasis following ovarian cancer
Dehydration

Scenario Timeline

(If Not Applicable please indicate N/A)

Start of Scenario	Patient currently in bed sleeping. Able to communicate, however very weak and tired.
0-5 minutes	Pressure relief required. Nurses turn patient and do a skin assessment taking care not to dislodge the syringe driver. Identify pressure relieving mattress is required and notice reddening to patients ear.
5-10 minutes	Patient complaining of a dry mouth. Sips of water given and oral care performed
10-15 minutes	Patient complaining of nausea. Cyclizine S/C to be given by student. Nurses prepare medication and consider whether an anti-emetic could be added to the syringe driver.
15-20 minutes	S/C Medication given and nurse contacts medical team to alter syringe driver medication. Dr refuses stating they are too busy
20-25 minutes	Student reassures patient who requests to see a priest. Students contacts the priest via telephone
25-30 minutes	All documentation completed.

Facilitator Roles

(If Not Applicable please indicate N/A)

Patient	Year 3 adult student nurse
Student Nurse	Year 1 adult student nurse
Senior Student Nurse	Year 3 adult student nurse
Medical Team	Year 3 adult student nurse
Facilitators/ Support	Adult nurse lecturing team

Equipment Set Up

(If Not Applicable please indicate N/A)

Equipment

- Syringe Driver
- Oral care pack
- Water and jug
- Name band

Documentation

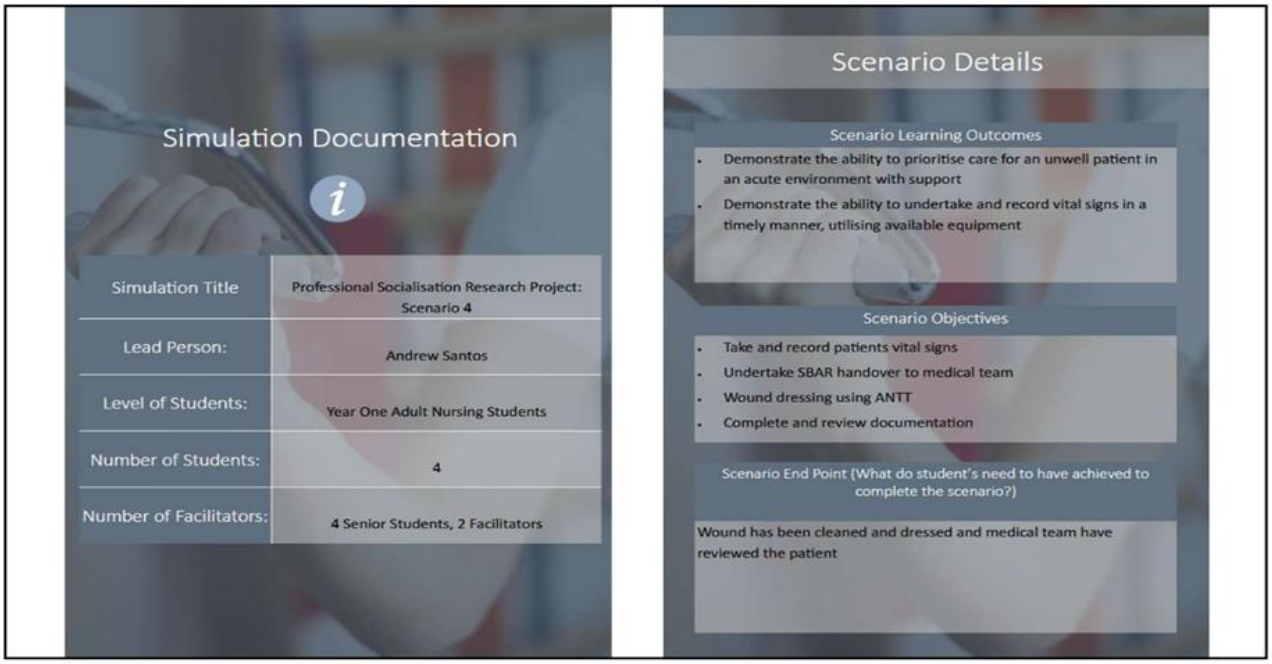
- End of life pathway
- Patients notes
- Risk assessment tools
- DNACPR status

Moulage

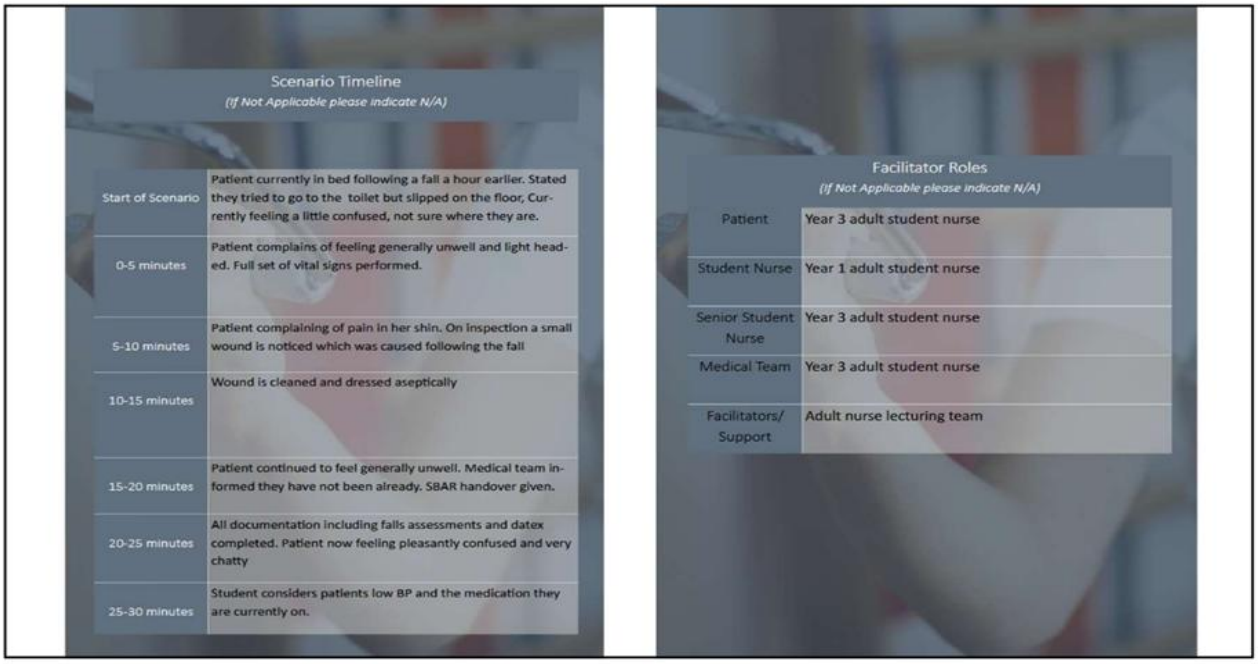
- Reddening to patients right ear from pressure damage

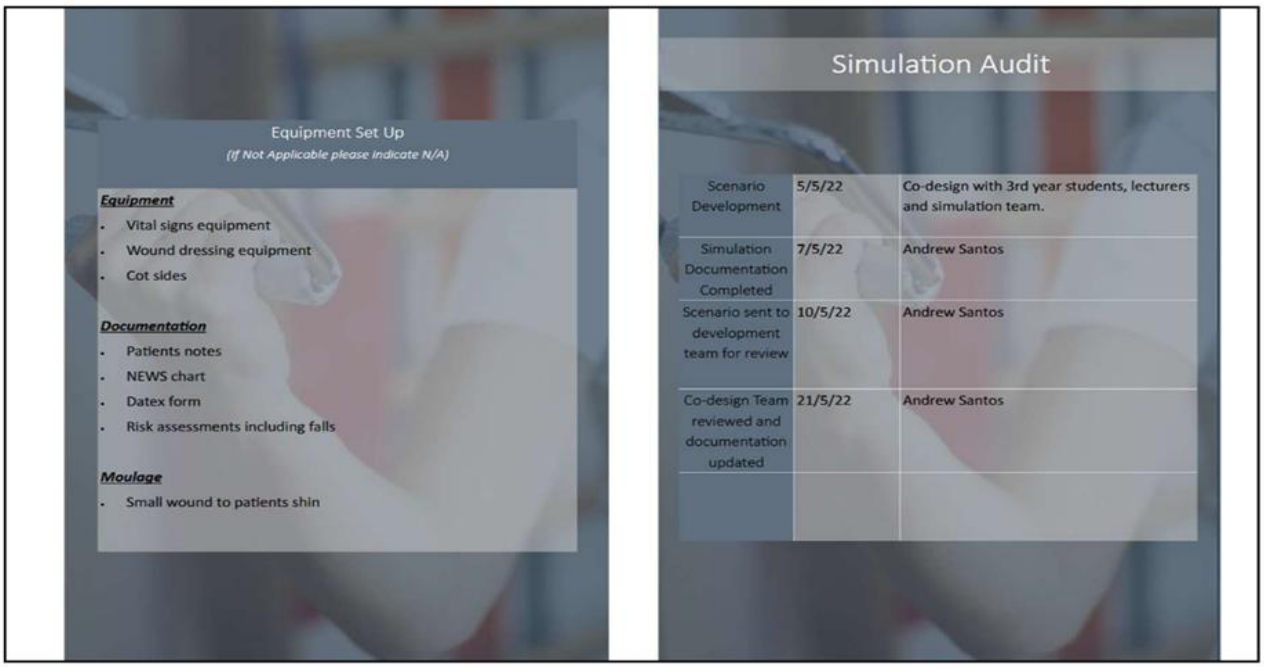
Simulation Audit

Scenario Development	5/5/22	Co-design with 3rd year students, lecturers and simulation team.
Simulation Documentation Completed	7/5/22	Andrew Santos
Scenario sent to development team for review	10/5/22	Andrew Santos
Co-design Team reviewed and documentation updated	21/5/22	Andrew Santos

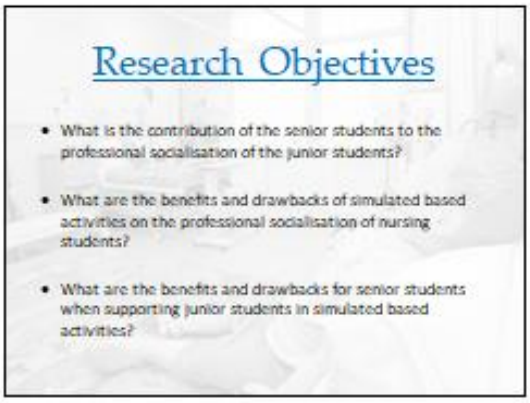

Simulation Documentation
Simulation Title
Professional Socialisation Research Project: Scenario 4
Lead Person:
Andrew Santos
Level of Students:
Year One Adult Nursing Students
Number of Students:
4
Number of Facilitators:
4 Senior Students, 2 Facilitators
Scenario Details
Scenario Learning Outcomes
Demonstrate the ability to prioritise care for an unwell patient in an acute environment with support
Demonstrate the ability to undertake and record vital signs in a timely manner, utilising available equipment
Scenario Objectives
Take and record patients vital signs
Undertake SBAR handover to medical team
Wound dressing using ANTT
Complete and review documentation
Scenario End Point (What do student's need to have achieved to complete the scenario?)
Wound has been cleaned and dressed and medical team have reviewed the patient

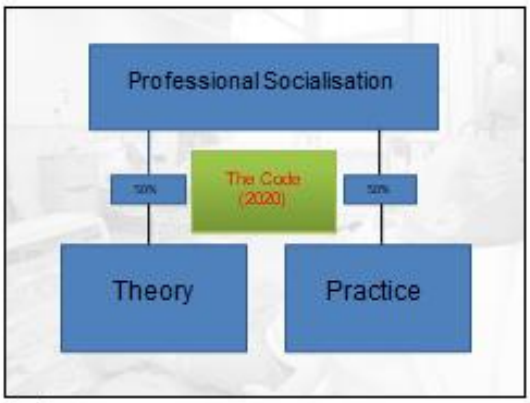

Patient Profile
Name
Gladys Potter
Address
4 Princes Drive, Barry
Age
61 (24/12/1960)
Gender
Female
Language
English
Allergies
Penicillin
Religion
Mormon
Patient Profile
Patient/Client Background or Past Medical History
(If Not Applicable please indicate N/A)
Hypertension
Arthritis
Family report a history of confusion over past 2/3 months
Medication
Aspirin 75mg OD
Ramipril 5mg OD
Spironolactone 25mg OD
Reason for Admission
Patient has been admitted following an increase of confusion over the past couple of months. Admitted following a fall at home, no major injury. States she has been feeling forgetful. Lives alone in a bungalow close to family
Diagnosis
Confusion ? Cause
?? UTI


Scenario Timeline
(If Not Applicable please indicate N/A)
Start of Scenario
Patient currently in bed following a fall a hour earlier. Stated they tried to go to the toilet but slipped on the floor, Currently feeling a little confused, not sure where they are.
0-5 minutes
Patient complains of feeling generally unwell and light headed. Full set of vital signs performed.
5-10 minutes
Patient complaining of pain in her shin. On inspection a small wound is noticed which was caused following the fall
10-15 minutes
Wound is cleaned and dressed aseptically
15-20 minutes
Patient continued to feel generally unwell. Medical team informed they have not been already. SBAR handover given.
20-25 minutes
All documentation including falls assessments and datex completed. Patient now feeling pleasantly confused and very chatty
25-30 minutes
Student considers patients low BP and the medication they are currently on.
Facilitator Roles
(If Not Applicable please indicate N/A)
Patient
Year 3 adult student nurse
Student Nurse
Year 1 adult student nurse
Senior Student Nurse
Year 3 adult student nurse
Medical Team
Year 3 adult student nurse
Facilitators/ Support
Adult nurse lecturing team


Equipment Set Up
(If Not Applicable please indicate N/A)
Equipment
Vital signs equipment
Wound dressing equipment
Cot sides
Documentation
Patients notes
NEWS chart
Datex form
Risk assessments including falls
Moulage
Small wound to patients shin
Simulation Audit
Scenario Development
5/5/22
Co-design with 3rd year students, lecturers and simulation team.
Simulation Documentation Completed
7/5/22
Andrew Santos
Scenario sent to development team for review
10/5/22
Andrew Santos
Co-design Team reviewed and documentation updated
21/5/22
Andrew Santos

Appendix 6: Junior Students Presentation





Your Participation

- You will then be invited to attend the Caerleon Suite to undertake a simulation followed by a debrief.
- The simulation will last for 2 hours and will have four scenarios
- The content of the simulation will involve skills which you may have already practiced as part of the programme.
- Following the simulation there will be a 1 hour debrief where your experience will be discussed
- The simulation and debrief will be video recorded using the SMOT cameras build into the rooms in the Caerleon Suite.

Benefits of Participation

- This is an opportunity to further your development and enhance your knowledge and understanding of areas of nursing care and simulated practice
- Develop you experience of simulation
- Participation may help to inform the development of future simulation activity

Data Collection

- All information collected about you during the research will be kept confidential and any personal information you provide will be managed in accordance with data protection legislation.
- You will be assigned a research identification number to support anonymity thus audio and video data will be anonymised on transcription
- If you agree to participate in the research the personal data collected will be your name, age band, level and programme of study and email address

Expressions of Interest

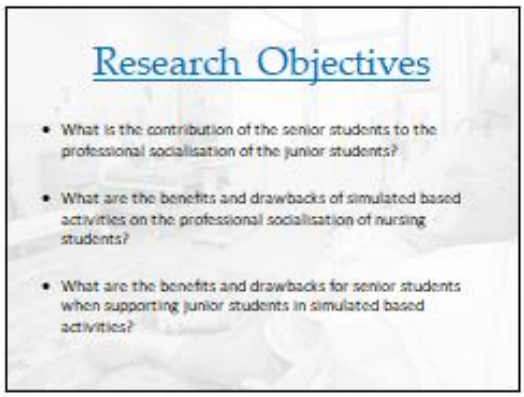
- I will post an announcement on learning central
- If you are interested in participating please email me on SantosA1@Cardiff.ac.uk within two weeks of the announcement
- I will email you with a participant information sheet and consent form which needs to be signed and returned to me within two weeks.
- If you have any further questions I am available to discuss these with you

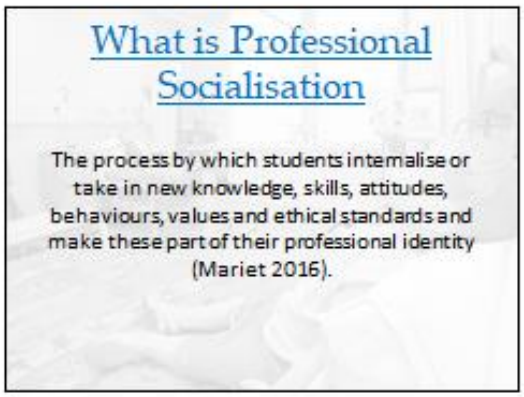
Key Points

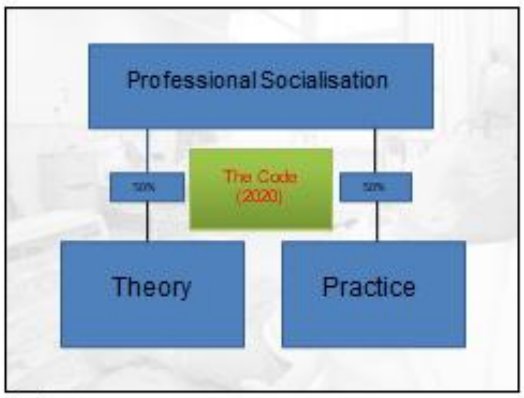
- Your participation is voluntary and there is no obligation on your behalf.
- Participation or non participation will not affect your studies or any assessments.
- If more than the required number of people express interest, participants will be chosen randomly
- The simulation will be facilitated during your theory block on a day when you do not have any other sessions
- There will be lecturers including myself there to support you during the simulation
- The simulation and debrief will be video recorded. All data will be kept confidential.
- The research project has University Ethical Approval.

Many thanks for listening
Any Questions?

Appendix 7: Senior Students Presentation







Virtual Placements

- In January 2021, revised NMC Recovery Standards were introduced. These state that "the amount of practice learning time spent in simulated practice learning experience can be up to a maximum of 300 hours across a programme's duration." (NMC 2021)
- "We know that simulation can be an effective alternative way of learning and can be a more flexible practical learning tool to support students in progressing their studies" (Mike Adams, RCN Director 2021)

What is Simulation?

- Simulation is defined as an artificial representation of a real world practice scenario that supports student development and assessment through experiential learning with the opportunity for repetition, feedback, evaluation and reflection." (Oxford Medical simulation 2021)
- "The promotion of understanding by doing"(Billings and Halstead 2005)

Key Points

- Research suggests mentors in clinical practice are key to the professional socialisation of student nurses
- If up to 300 hours of clinical practice may used for virtual placements
- Simulation is an effective tool in supporting student development.

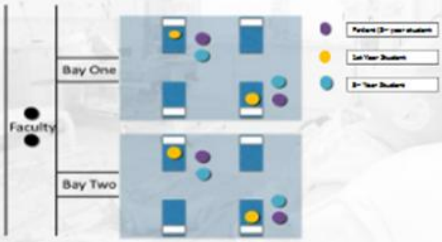
Research Title

An investigation into the effect of peer learning through simulated based activities on the development of adult nursing student's professional socialisation.

Research Proposal

- Co-design scenarios with 3rd year Students Nurses and Adult Nursing Lecturers to ensure realism and quality
- Undertake a simulation with 3rd year students supporting 1st year student nurses
- Facilitate a debrief following the simulation with all participants
- Interview a purposeful sample of third year students following completion of the programme to further explore experience

Simulation Proposal



Your Participation Option 1

- You will then be invited to attend the Caerleon Suite to undertake a simulation followed by a debrief.
- The simulation will last for 2 hours and will have four scenarios
- Prior to the simulation there will be a pre-brief where the scenarios will be discussed
- Following the simulation there will be a 1 hour debrief where your experience will be discussed
- The simulation and debrief will be video recorded using the SMOT cameras build into the rooms in the Caerleon Suite.
- With your consent I may contact you when you have qualified to undertake an interview to reflect on the simulation

Your Participation Option 2

- You will be invited to attend an online workshop with Adult Nurse Lecturers to co-design four scenarios which will last approximately 2 hours
- You will then be invited to play the role of the patient during the simulation which will last for 2 hours
- The simulation will be video recorded using the SMOT cameras build into the rooms in the Caerleon Suite.

Benefits of Participation

- This is an opportunity to further your development and enhance your knowledge and understanding of areas of nursing care and simulated practice
- Develop you experience of simulation
- Participation may help to inform the development of future simulation activity

Data Collection

- All information collected about you during the research will be kept confidential and any personal information you provide will be managed in accordance with data protection legislation.
- You will be assigned a research identification number to support anonymity thus audio and video data will be anonymised on transcription
- If you agree to participate in the research the personal data collected will be your name, age band, level and programme of study and email address

Expressions of Interest

- I will post an announcement on learning central
- If you are interested in participating please email me on SantosA1@Cardiff.ac.uk within two weeks of the announcement stating which option you would prefer
- I will email you with a participant information sheet and consent form which needs to be signed and returned to me within two weeks.
- If you have any further questions I am available to discuss these with you

Key Points

- Your participation is voluntary and there is no obligation on your behalf.
- Participation or non participation will not affect your studies or any assessments.
- If more than the required number of people express interest, participants will be chosen randomly
- The simulation will be facilitated during your clinical block and you will be awarded clinical hours for participation
- There will be lecturers including myself there to support you during the simulation
- The simulation and debrief will be video recorded. All data will be kept confidential.
- The research project has University Ethical Approval.


Many thanks for listening
Any Questions?


If you would like to be involved please email me following the announcement on learning central
Diolch yn fawr am wrando
SantosA1@Cardiff.ac.uk

Appendix 8: Junior Students Participant Information Sheet

PARTICIPANT INFORMATION SHEET

An Exploration of the Influence of Peer Support on Adult Nursing Students' Professional Socialisation

You are 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. If you have any questions, please contact Andrew Santos whose contact details are provided at the end.

1. **What is the purpose of this research project?**

Student nurses' professional values and professional identity continue to be represented in great detail within student nurses' core competencies (NMC 2020). Key to their development is the process of professional socialisation where students internalise new knowledge, skills, attitudes, behaviours, values and ethical standards. Although professional socialisation occurs in the classroom, there is much research to suggest that clinical placements are key as students have an opportunity to experience the reality of the workplace and work alongside supervisors and other healthcare professionals.

Given the challenge of securing clinical placements, the NMC has issued guidelines for Universities on the implementation of Virtual Placements as an alternative. Although this reduces the opportunities students have to work with practice supervisors, which may affect their professional socialisation, there is evidence to suggest that peer learning can have a positive effect on both the student 'teacher' and

the student ‘learner’. This research aims to explore the effect of peer support in the simulation-based learning environment on the professional socialisation of student nurses on the adult programme.

This research project is being undertaken as part of a Professional Doctorate in Education, in the School of Social Sciences at Cardiff University.

2. Why have I been invited to take part?

You have been invited because you are currently an Adult Nursing Student at the School of Healthcare Sciences, Cardiff University in years 1 or 3.

3. What will taking part involve?

You will be invited to attend a learning activity in the simulation centre which will last for approximately 2 hours. Following the simulation there will be a debrief where your experiences will be discussed. The content of the simulation will involve skills which you may have already practiced as part of the programme.

For 3rd year students, you may be approached when you have qualified as a registered nurse to take part in a short interview to reflect on this simulation-based experience.

All simulations and debriefs will be video recorded using SMOT cameras and the interviews will be audio recorded to allow for further analysis.

4. Do I have to take part?

No, your participation in this research is entirely voluntary and it is up to you to decide whether or not to take part. If you decide to take part, I can discuss the research with you further 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 assessments or progress on the programme.

You are free to withdraw your consent to participate in the research at any time, without giving a reason, even after signing the consent form. However, data already collected from you may be used in the analysis and write up of the research.

5. Will I be paid for taking part?

No, there will not be a payment for taking part.

6. What are the possible benefits of taking part?

This is an opportunity to further your development and enhance your knowledge and understanding of areas of nursing care and simulation-based practice. There are also wider, altruistic benefits of participation as it may help to inform the development of future simulation activity. You will be supported by a member of the teaching team throughout and will be awarded clinical hours for your time spend undertaking the learning opportunity.

7. What are the possible risks of taking part?

This is simulation similar to simulation-based learning activities currently offered in the nursing programme and a risk assessment has been undertaken. Research has shown that simulation can possibly cause anxiety as it simulates real life practice. There will be several lecturers observing the simulation who will offer support to both 1st and 3rd year students as required.

Before the simulation third year students will attend a pre-brief where they will be introduced to the scenarios. This will allow the students to ask any questions and discuss any concerns they have regarding the scenarios.

8. Will my taking part in this research project be kept confidential?

All information collected about you during the research will be kept confidential and any personal information you provide will be managed in accordance with data protection legislation. In addition, you will be assigned a research identification number to support anonymity thus audio data will be anonymised on transcription. When completing the analysis of the video recordings all students will be referred to as their research identification number and any quotes that form part of the analysis will be anonymised.

However, you should understand the limits of confidentiality in group discussions which will take place during the activities and debrief; any information you share will

be known to others in the group. All participants will be asked to respect the confidentiality of the group discussion.

9. What will happen to my Personal Data?

If you agree to participate in the research the personal data collected will be your name, age band, level and programme of study and email address. Throughout the research you will be assigned a research identification number to support anonymity. Video and audio recordings of the simulation, debriefing, future interviews and consent forms will be transferred to the university OneDrive and erased from the recording device.

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

may be found at https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection

At the point of transcription all **audio recorded data** and **video recordings** collected from you will be anonymised. Your **consent form** will not be anonymised but all data will be retained securely in accordance with Cardiff University research ethics requirements and will only be accessed by the research student and, where necessary, his supervisors and by members of the University's governance and audit teams or by regulatory authorities. Data will be kept for a minimum of 5 years, or at least 2 years post-publication. Anonymised data may be published in support of the research project and/or retained indefinitely, where it is likely to have continuing value for research purposes.

You may withdraw from the study at any time without giving reason and withdrawal will not affect your progress on the programme or your assessments. However, data already collected may still be used in the study.

10. What happens to the data at the end of the research project?

This research project is being undertaken as part of a Professional Doctorate and will be analysed and presented in the thesis prepared by the researcher, Andrew Santos. Raw data (video recordings) will not be made publicly available or shared outside of the University or within the University (expect with the doctoral student's supervisors and, where necessary, by members of the University's governance and audit teams or by regulatory authorities). However, anonymised interview transcripts may be made publicly available via a data repository and may be used for purposes not related to this research project. It will not be possible to identify you from data that may be seen and used by other researchers, for ethically approved research projects and that confidentiality will be maintained.

Data will be retained in accordance with Cardiff University research ethics requirements and kept for a minimum of 5 years, or at least 2 years post-publication.

11. What will happen to the results of the research project?

In addition to the professional doctorate submission, it is expected that the results of this research project will be submitted for publication in academic journals and presented at conferences. Participants will **not** be identified in any report, publication or presentation. Verbatim quotes from participants may be used, however these will be fully anonymised using research identification numbers.

12. What if there is a problem?

If you wish to complain, or have grounds for concerns about any aspect of the manner in which you have been approached or treated during the course of this research, please contact one of the doctoral supervisors, Alison Bullock (bullockad@cardiff.ac.uk) or Paul Gill (GillP3@cardiff.ac.uk). If your complaint is not managed to your satisfaction, please contact the Ethics Committee in the School of Social Sciences: (socsi-ethics@cardiff.ac.uk)

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 research is organised by Andrew Santos as part of a professional doctorate and supported by his supervisors Alison Bullock and Paul Gill.

14. Who has reviewed this research project?

This research project has been reviewed and given a favourable opinion by the SOCSI Research Ethics Committee, Cardiff University

15. Further information and contact details

Should you have any questions relating to this research project, you may contact me during normal working hours:

Andrew Santos
Room 2.13
Ty Dewi Sant
Tel (029)20687595
SantosA1@cardiff.ac.uk

Thank you for considering taking 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.

Appendix 9: Senior Students Participant Information Sheet

PARTICIPANT INFORMATION SHEET

An Exploration of the Influence of Peer Support on Adult Nursing Students' Professional Socialisation

You are 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. If you have any questions, please contact Andrew Santos whose contact details are provided at the end.

1. **What is the purpose of this research project?**

Student nurses' professional values and professional identity continue to be represented in great detail within student nurses' core competencies (NMC 2020). Key to their development is the process of professional socialisation where students internalise new knowledge, skills, attitudes, behaviours, values and ethical standards. Although professional socialisation occurs in the classroom, there is much research to suggest that clinical placements are key as students have an opportunity to experience the reality of the workplace and work alongside supervisors and other healthcare professionals.

Given the challenge of securing clinical placements, the NMC has issued guidelines for Universities on the implementation of Virtual Placements as an alternative. Although this reduces the opportunities students have to work with practice supervisors, which may affect their professional socialisation, there is evidence to suggest that peer learning can have a positive effect on both the student 'teacher' and the student 'learner'. This research aims to explore the effect of peer support in the simulation-based learning environment on the professional socialisation of student nurses on the adult programme.

This research project is being undertaken as part of a Professional Doctorate in Education, in the School of Social Sciences at Cardiff University.

2. Why have I been invited to take part?

You have been invited because you are currently an Adult Nursing Student at the School of Healthcare Sciences, Cardiff University in year 3.

3. What will taking part involve?

You will be invited to contribute to the co-design of four adult nursing scenarios to be used as part of a nursing simulation. The scenarios will be developed with Adult Nurse Lecturers and you will be invited to attend an online workshop to contribute to their development. The workshop will last approximately 2 hours.

You will also be invited to attend a learning activity in the simulation centre which will last for approximately 2 hours. You will be simulating the role of a patient during a simulation where 3rd year students will be supporting 1st year students undertaking the four scenarios. Following the simulation there will be a debrief where your experiences will be discussed. The content of the simulation will involve skills, which students may have already practiced as part of the programme.

All simulations and debriefs will be video recorded using SMOT cameras.

4. Do I have to take part?

No, your participation in this research is entirely voluntary and it is up to you to decide whether or not to take part. If you decide to take part, I can discuss the research with you further 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 assessments or progress on the programme.

You are free to withdraw your consent to participate in the research at any time, without giving a reason, even after signing the consent form. However, data already collected from you may be used in the analysis and write up of the research.

5. **Will I be paid for taking part?**

No, there will not be a payment for taking part.

6. **What are the possible benefits of taking part?**

This is an opportunity to further your development and enhance your knowledge and understanding of areas of nursing care and simulation-based practice. There are also wider, altruistic benefits of participation as it may help to inform the development of future simulation activity. You will be supported by a member of the teaching team throughout and will be awarded clinical hours for your time spend undertaking the simulation and co-designing the scenarios.

7. **What are the possible risks of taking part?**

This is simulation similar to simulation-based learning activities currently offered in the nursing programme and a risk assessment has been undertaken. Research has shown that simulation can possibly cause anxiety as it simulates real life practice. There will be several lecturers observing the simulation who will offer support to students as required.

8. **Will my taking part in this research project be kept confidential?**

All information collected about you during the research will be kept confidential and any personal information you provide will be managed in accordance with data protection legislation. In addition, you will be assigned a research identification number to support anonymity thus audio data will be anonymised on transcription. When completing the analysis of the video recordings all students will be referred to as their research identification number and any quotes that form part of the analysis will be anonymised.

However, you should understand the limits of confidentiality in group discussions which will take place during the activities and debrief; any information you share will be known to others in the group. All participants will be asked to respect the confidentiality of the group discussion.

9. **What will happen to my Personal Data?**

If you agree to participate in the research the personal data collected will be your name, age band, level and programme of study and email address. Throughout the research you will be assigned a research identification number to support anonymity. Video and audio recordings of the simulation, debriefing, future interviews and consent forms will be transferred to the university OneDrive and erased from the recording device.

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

may be found at https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection

At the point of transcription all **audio recorded data** and **video recordings** collected from you will be anonymised. Your **consent form** will not be anonymised but all data will be retained securely in accordance with Cardiff University research ethics requirements and will only be accessed by the research student and, where necessary, his supervisors and by members of the University's governance and audit teams or by regulatory authorities. Data will be kept for a minimum of 5 years, or at least 2 years post-publication. Anonymised data may be published in support of the research project and/or retained indefinitely, where it is likely to have continuing value for research purposes.

You may withdraw from the study at any time without giving reason and withdrawal will not affect your progress on the programme or your assessments. However, data already collected may still be used in the study.

10. What happens to the data at the end of the research project?

This research project is being undertaken as part of a Professional Doctorate and will be analysed and presented in the thesis prepared by the researcher, Andrew Santos. Raw data (video recordings) will not be made publicly available or shared outside of the University or within the University (expect with the doctoral student's supervisors and, where necessary, by members of the University's governance and audit teams or by regulatory authorities). However, anonymised interview transcripts may be made publicly available via a data repository and may be used for purposes not related to this research project. It will not be possible to identify you from data that may be seen and used by other researchers, for ethically approved research projects and that confidentiality will be maintained.

Data will be retained in accordance with Cardiff University research ethics requirements and kept for a minimum of 5 years, or at least 2 years post-publication.

11. What will happen to the results of the research project?

In addition to the professional doctorate submission, it is expected that the results of this research project will be submitted for publication in academic journals and presented at conferences. Participants will **not** be identified in any report, publication or presentation. Verbatim quotes from participants may be used, however these will be fully anonymised using research identification numbers.

12. What if there is a problem?

If you wish to complain, or have grounds for concerns about any aspect of the manner in which you have been approached or treated during the course of this research, please contact one of the doctoral supervisors, Alison Bullock (bullockad@cardiff.ac.uk) or Paul Gill (GillP3@cardiff.ac.uk). If your complaint is not managed to your satisfaction, please contact the Ethics Committee in the School of Social Sciences: (socsi-ethics@cardiff.ac.uk)

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 research is organised by Andrew Santos as part of a professional doctorate and supported by his supervisors Alison Bullock and Paul Gill.

14. Who has reviewed this research project?

This research project has been reviewed and given a favourable opinion by the SOCSI Research Ethics Committee, Cardiff University

15. Further information and contact details

Should you have any questions relating to this research project, you may contact me during normal working hours:

Andrew Santos
Room 2.13
Ty Dewi Sant
Tel (029)20687595
SantosA1@cardiff.ac.uk

Thank you for considering taking 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.

Appendix 10: Student Consent Form

Participant ID no:

CONSENT FORM

Title of research project: An Exploration of the Influence of Peer Support on Nursing Students Professional Socialisation

SREC reference and committee: [Insert once approved]

Name of Chief/Principal Investigator: Andrew Santos

	Please initial box
I confirm that I have read the information sheet dated 30/01/2022 version 3, for the above research project.	
I confirm that I have understood the information sheet dated 30/01/2022 version 3 for the above research project and 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 data collected during the research project may be looked at by individuals from Cardiff University or from 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 including name, age range, level and programme of study and email address, 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 who will have access to personal information provided, how the data will be stored and what will happen to the data at the end of the research project.	
I understand that after the research project, anonymised data may be made publicly available via a data repository and may be used for purposes not related to this research project. I understand that it will not be possible to identify me from this data that is seen and used by other researchers, for ethically approved research projects, on the understanding that confidentiality will be maintained.	
I consent to being audio recorded/ video recorded/ having my photograph taken 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 the simulation, debrief and possible future interviews 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

_____

Role of person taking consent

(print)

THANK YOU FOR PARTICIPATING IN OUR RESEARCH

YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP

Appendix 11: Participation e-mail to Lecturers and Simulation Technicians

To *Participant*

You are receiving this email as you are currently a member of the Adult Simulation Working Group for the BN Adult Nursing Programme at Cardiff University.

Please accept this email as an invitation to participate in research as part of my Doctorate in Education.

Key to student development is the process of professional socialisation where students internalise new knowledge, skills, attitudes, behaviours, values and ethical standards. Although professional socialisation occurs in the classroom, there is much research to suggest that clinical placements are key, as students have an opportunity to experience the reality of the workplace and work alongside practice supervisors and other healthcare professionals.

In January 2021, revised NMC Recovery Standards were introduced stating that the amount of practice learning time spent in simulation-based practice learning experience can be up to a maximum of 300 hours across a programme's duration. Although this reduces the opportunities students have to work with practice supervisors, which may affect their professional socialisation, there is evidence to suggest that peer learning can have a positive effect on both the student 'teacher' and the student 'learner'. My research aims to explore the effect of peer support in the simulation-based learning environment on the professional socialisation of student nurses on the adult programme.

My aim is to facilitate simulation-based activities in the Caerleon Suite, Ty-Dewi-Sant, with four third year students supporting four first year students. There will be four scenarios which the student's will work through followed by a debrief. The simulations will run twice over two days.

As part of the research, you are invited to contribute to the co-design of four adult nursing scenarios to be used as part of the nursing simulation. The scenarios will be developed with third year Student Nurses who will also act as the patients for the simulations. You will be invited to attend an online workshop to contribute to their development which will last approximately 2 hours.

You will also be invited to attend the learning activity in the simulation centre which will last for approximately 2 hours. You will be supporting the simulation as an observer and to support with any issues or concerns students may have. The content of the simulation may involve skills, which students may have already practiced as part of the programme.

If you are interested in participating in this research please can you contact me within 2 weeks of my email. I will then send you a participation information sheet and a consent form to sign.

Many thanks for taking the time to read this email, if you have any further questions please don’t hesitate to contact me.

Best wishes

Andrew Santos

Appendix 12: Lecturer and Simulation Technician Participation Information Sheet

PARTICIPANT INFORMATION SHEET

An Exploration of the Influence of Peer Support on Adult Nursing Students' Professional Socialisation

You are 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. If you have any questions, please contact Andrew Santos whose contact details are provided at the end.

1. **What is the purpose of this research project?**

Student nurses' professional values and professional identity continue to be represented in great detail within student nurses' core competencies (NMC 2020). Key to their development is the process of professional socialisation where students internalise new knowledge, skills, attitudes, behaviours, values and ethical standards. Although professional socialisation occurs in the classroom, there is much research to suggest that clinical placements are key as students have an opportunity to experience the reality of the workplace and work alongside supervisors and other healthcare professionals.

Given the challenge of securing clinical placements, the NMC has issued guidelines for Universities on the implementation of Virtual Placements as an alternative. Although this reduces the opportunities students have to work with practice supervisors, which may affect their professional socialisation, there is evidence to suggest that peer learning can have a positive effect on both the student 'teacher' and the student 'learner'. This research aims to explore the effect of peer support in the

simulation-based learning environment on the professional socialisation of student nurses on the adult programme.

This research project is being undertaken as part of a Professional Doctorate in Education, in the School of Social Sciences at Cardiff University.

2. Why have I been invited to take part?

You have been invited because you are currently an Adult Nursing Lecturer at the School of Healthcare Sciences, Cardiff University

3. What will taking part involve?

You will be invited to contribute to the co-design of four adult nursing scenarios to be used as part of a nursing simulation. The scenarios will be developed with third year Student Nurses and you will be invited to attend an online workshop to contribute to their development. The workshop will last approximately 2 hours.

You will also be invited to attend a learning activity in the simulation centre which will last for approximately 2 hours. You will be supporting a simulation where 3rd year students will be supporting 1st year students undertaking the four scenarios. Your role will be one of observer and to support with any issues or concerns students may have. The content of the simulation will involve skills, which students may have already practiced as part of the programme.

All simulations and debriefs will be video recorded using SMOT cameras.

4. Do I have to take part?

No, your participation in this research is entirely voluntary and it is up to you to decide whether or not to take part. If you decide to take part, I can discuss the research with you further and ask you to sign a consent form. If you decide not to take part, you do not have to explain your reasons.

You are free to withdraw your consent to participate in the research at any time, without giving a reason, even after signing the consent form. However, data already collected from you may be used in the analysis and write up of the research.

5. Will I be paid for taking part?

No, there will not be a payment for taking part.

6. What are the possible benefits of taking part?

This is an opportunity to further your development and enhance your knowledge and understanding of areas of nursing care and simulation-based practice. There are also wider, altruistic benefits of participation as it may help to inform the development of future simulation activity.

7. What are the possible risks of taking part?

This is simulation similar to simulation-based learning activities currently offered in the nursing programme and a risk assessment has been undertaken. Research has shown that simulation can possibly cause anxiety as it simulates real life practice, therefore your role will be observing the simulation who will offer support to students as required.

8. Will my taking part in this research project be kept confidential?

All information collected about you during the research will be kept confidential and any personal information you provide will be managed in accordance with data protection legislation. In addition, you will be assigned a research identification number to support anonymity thus audio data will be anonymised on transcription. When completing the analysis of the video recordings all participants will be referred to as their research identification number and any quotes that form part of the analysis will be anonymised.

However, you should understand the limits of confidentiality in any discussions which will take place during the activities

9. What will happen to my Personal Data?

If you agree to participate in the research the personal data collected will be your name, years of experience, current role and email address. Throughout the research you will be assigned a research identification number to support anonymity. Video

and audio recordings of the simulation and consent forms will be transferred to the university OneDrive and erased from the recording device.

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

may be found at https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection

At the point of transcription all **audio recorded data** and **video recordings** collected from you will be anonymised. Your **consent form** will not be anonymised but all data will be retained securely in accordance with Cardiff University research ethics requirements and will only be accessed by the research student and, where necessary, his supervisors and by members of the University's governance and audit teams or by regulatory authorities. Data will be kept for a minimum of 5 years, or at least 2 years post-publication. Anonymised data may be published in support of the research project and/or retained indefinitely, where it is likely to have continuing value for research purposes.

You may withdraw from the study at any time without giving reason. However, data already collected may still be used in the study.

10. What happens to the data at the end of the research project?

This research project is being undertaken as part of a Professional Doctorate and will be analysed and presented in the thesis prepared by the researcher, Andrew Santos. Raw data (video recordings) will not be made publicly available or shared outside of the University or within the University (expect with the doctoral student's supervisors

and, where necessary, by members of the University's governance and audit teams or by regulatory authorities).

Data will be retained in accordance with Cardiff University research ethics requirements and kept for a minimum of 5 years, or at least 2 years post-publication.

11. What will happen to the results of the research project?

In addition to the professional doctorate submission, it is expected that the results of this research project will be submitted for publication in academic journals and presented at conferences. Participants will **not** be identified in any report, publication or presentation. Verbatim quotes from participants may be used, however these will be fully anonymised using research identification numbers.

12. What if there is a problem?

If you wish to complain, or have grounds for concerns about any aspect of the manner in which you have been approached or treated during the course of this research, please contact one of the doctoral supervisors, Alison Bullock (bullockad@cardiff.ac.uk) or Paul Gill (GillP3@cardiff.ac.uk). If your complaint is not managed to your satisfaction, please contact the Ethics Committee in the School of Social Sciences: (socsi-ethics@cardiff.ac.uk)

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 research is organised by Andrew Santos as part of a professional doctorate and supported by his supervisors Alison Bullock and Paul Gill.

14. Who has reviewed this research project?

This research project has been reviewed and given a favourable opinion by the SOCSI Research Ethics Committee, Cardiff University

15. Further information and contact details

Should you have any questions relating to this research project, you may contact me during normal working hours:

Andrew Santos
Room 2.13
Ty Dewi Sant
Tel (029)20687595
SantosA1@cardiff.ac.uk

Thank you for considering taking 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.

Appendix 13: Lecturer and Simulation Technician Consent Form

Participant ID no:

CONSENT FORM

Title of research project: An Exploration of the Influence of Peer Support on Nursing Students Professional Socialisation

SREC reference and committee: [Insert once approved]

Name of Chief/Principal Investigator: Andrew Santos

	Please initial box
I confirm that I have read the information sheet dated 30/01/2022 version 3, for the above research project.	
I confirm that I have understood the information sheet dated 30/01/2022 version 3 for the above research project and 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 data collected during the research project may be looked at by individuals from Cardiff University or from 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 name, years of experience, current role and email address, 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 who will have access to personal information provided, how the data will be stored and what will happen to the data at the end of the research project.	
I understand that after the research project, anonymised data may be made publicly available via a data repository and may be used for purposes not related to this research project. I understand that it will not be possible to identify me from this data that is seen and used by other researchers, for ethically approved research projects, on the understanding that confidentiality will be maintained.	
I consent to being audio recorded/ video recorded/ having my photograph taken 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 the simulation, debrief and possible future interviews 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

_____

Role of person taking consent

(print)

THANK YOU FOR PARTICIPATING IN OUR RESEARCH

YOU WILL BE GIVEN A COPY OF THIS CONSENT FORM TO KEEP

Appendix 14: Post Simulation Questionnaire

Simulation Evaluation

Please rate the following elements. Please tick the box between 'Not at all' and 'Very Much' to indicate how you value learning within a simulation-based learning environment. Additional comments can be included after each item or on the additional information page.

How do you value learning within a simulation-based environment?									
Not at all		**Not Really**		**Undecided**		**Somewhat**		**Very Much**	
Please expand on your answer									

How would you apply the knowledge/information you have gained from the day?

How did working with a junior/senior student affect your experience?

What did you value most about the day?

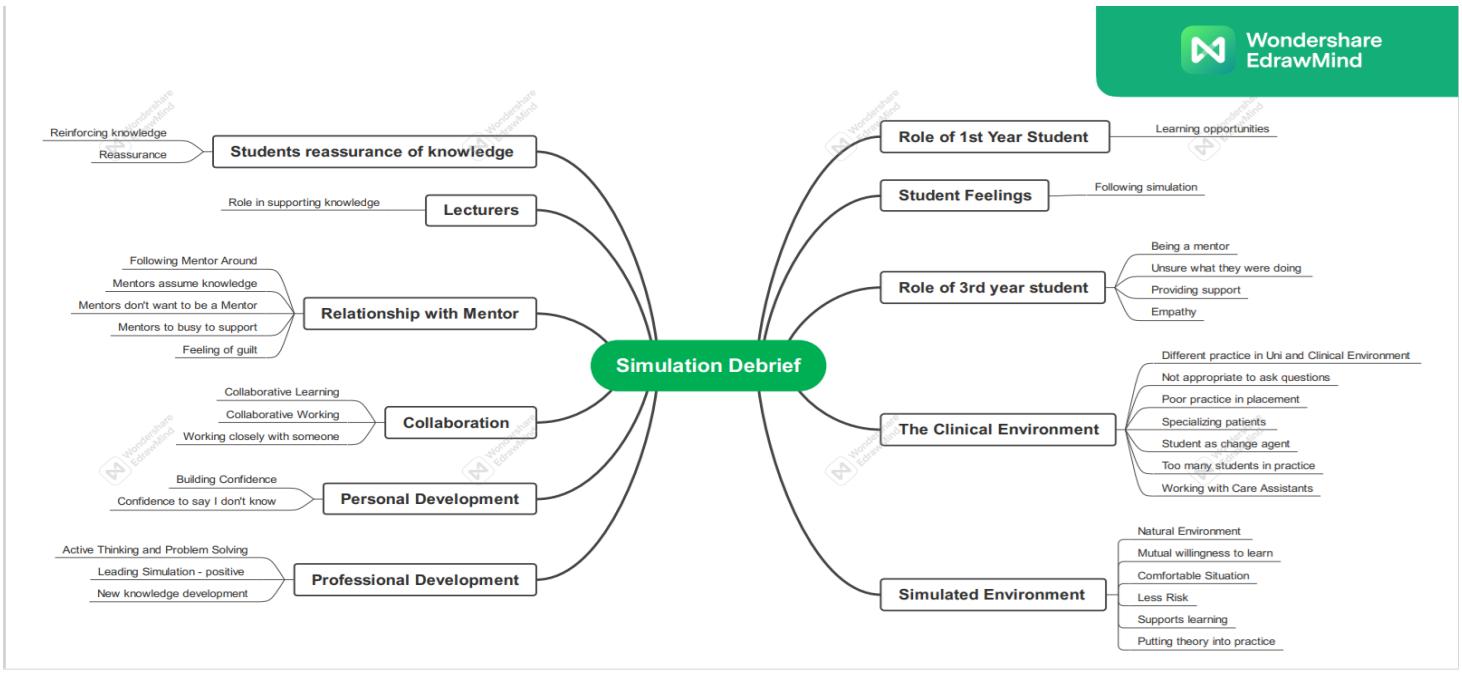
How will the simulation affect your practice?

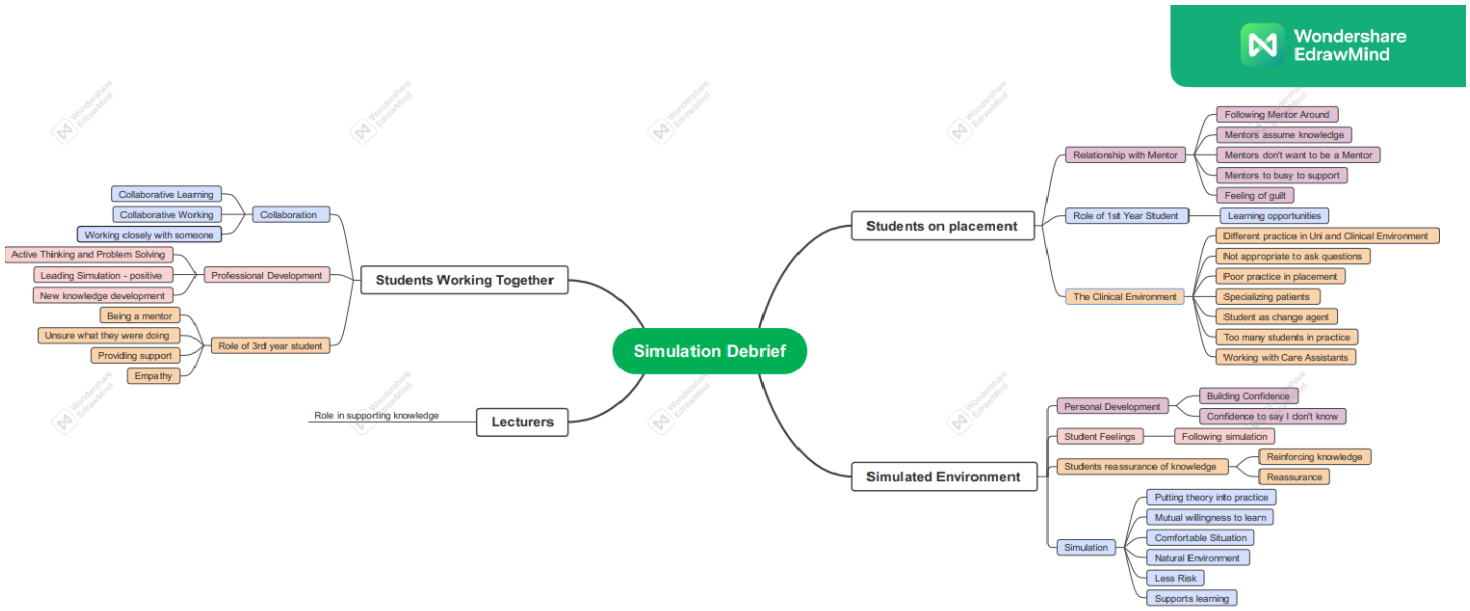
Are there any changes you would make to the day?

Any further comments?

Appendix 15: 3D Debriefing Model

Appendix 16: Initial Mind-Maps





Appendix 17: Interview Question Guide

General Questions
Q1 – How are you enjoying being a qualified nurse? Q2 – To what extent did you feel that the degree/programme prepared you for working as a qualified nurse? Q3 - How would you describe your experience of the transition from student to qualified nurse? Q4 – What have been the biggest challenges for you as a newly qualified nurse?
Simulation
Q5 – Thinking back to the simulation, what stands out in your memory about that experience? Q6 - To what extent was it a valuable experience for you? Q7 - Reflecting back, do you think you had sufficient knowledge and experience to support the students during the simulation? Q8 – How do you value the opportunity for junior students to spent time with senior students? Q9 – How did the simulation affect your confidence? -How do you think it affected the Junior Students confidence?
Near Peer Learning and Mentorship
Q9 – One of my findings was that there seemed to be a notable difference between how the students responded to working with the mentors in practice and how they responded to working with the seniors' students. What do you think that difference was? What are your thoughts on this?

Q10 – During the debriefs students reported feeling less judged by their senior peers than mentors in practice, and felt they were able to freely ask questions.

- Why do you think that was?
- (Probe the effect of the assessor role)?

Q11 – As a qualified nurse to what extent do you believe students' value a mentor's experience in practice?

- How important is years of practice experience?
- How important is recent experience of the programme?
- Which do you think you value most highly?

Clinical Area

Q12 – During the debrief students reported some practices or techniques were different in clinical practice to what is taught at the University – What is your experience of this?

Q13 – How does the culture you work in affect the quality of your practice?

Q14 – When reflecting back on the simulation, what, if anything, did you learn from it that you can apply to being a mentor in the future?

Appendix 18: Reflective Journal Extracts