

**The Lived Experiences of Saudi Arabian Occupational
Therapy Undergraduate Students in Internship and The
Influences of Problem-Based Learning: An Interpretative
Phenomenological Analysis.**

**Thesis submitted in partial fulfilment of the degree of
Doctor of Philosophy in Occupational Therapy**

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Abstract

Background: Problem-based learning (PBL) is an educational approach that has been widely used in the education of healthcare professionals (HCPs), including occupational therapists (OTs). The PBL approach engages students in real-world problems through the process of problem-solving, which has a positive impact on students' ability to apply theoretical knowledge when they move to practice. However, the transition from education to practice is a critical period for new OT graduates. This period is often challenging, as new graduates are expected to apply their knowledge and skills and adapt to new roles and responsibilities while integrating into a new workplace. The internship programme in Kingdom of Saudi Arabia (KSA) was designed to assist newly-qualified OTs in dealing with this transition period. However, there is limited research on OT interns' experience in internship and the impact of the PBL method on OT interns' practice.

Aim: This thesis aimed to investigate OT internship students' lived experiences and understand the influences of PBL when they move to practice in SA. Its objectives were to explore the lived experiences and meaning-making of OT interns during their internship, including the enablers and barriers that they encountered, to gain a deeper understanding of the influences of PBL during this transition.

Method: An interpretative phenomenological analysis (IPA) approach was used to discover six OT interns' experiences. Through purposeful homogeneous sampling and by utilising semi-structured interviews, the data was analysed using Smith et al.'s (2009) six-step process to create themes.

Findings: From IPA analysis, six main themes emerged, alongside several subthemes. A key finding of the study was that OT interns recognised many PBL benefits during their undergraduate period that could be gained if the concept and goal of PBL were made clear, PBL scenarios were relevant and applicable to the KSA context. OT interns felt lost, scared, shocked and weird in their early experiences of transition due to new environment and lack of experience, coupled with the theory-practice gap and negative impact of Covid-19. However, some personal factors (e.g., knowledge and skills, confidence) and organizational factors (e.g., supervision, the environment, and social support) facilitated their transition. Finally, OT interns identified that PBL had a positive impact on their internship components including the inter-personal, cognitive and task-supporting impact.

Declaration

This thesis is the result of my own independent work, except where otherwise stated, and the views expressed are my own. Other sources are acknowledged by explicit references. The thesis has not been edited by a third party beyond what is permitted by Cardiff University's Use of Third Party Editors by Research Degree Students Procedure.

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Glossary

IPA: Interpretative phenomenological analysis

OT: Occupational therapy

OTs: Occupational therapist

PBL: Problem-based learning

Self-DL: Self-directed learning

SDT: Self-determination theory

KSA: Kingdom of Saudi Arabia

SA: Saudi Arabian

PhD: A Doctor of Philosophy

HCP: Healthcare professionals

PT: Physiotherapy

SBL: Scenario-based Learning

CBL: Context-based learning

EBP: Evidence-based practice

EBL: Enquiry Based Learning

MH: Mental Health

PPE: Personal protective equipment

Thesis structure

This thesis is divided into nine chapters.

Chapter 1: Offers a background regarding PBL, the transition to practice, and the rationale of this thesis.

Chapter 2: Describes the context for the thesis, including the OT service, published articles, universities, and internship programmes in KSA.

Chapter 3: Justifies the use of a scoping review and presents the scoping review that relates to the lived experiences of OTs when they move to practice and the PBL impact to OT and HCPs practice.

Chapter 4: The IPA research methodology is described, outlining the thesis paradigm and methodological framework and justifying my use of IPA.

Chapter 5: The research methods used are justified, including recruitment, sampling, data collection, data analysis, ethical considerations, and trustworthiness.

Chapter 6: The six OT interns' descriptive accounts (idiographic analyses) are presented using IPA.

Chapter 7: The OT interns' shared experiences are identified using IPA cross-case pattern exploration.

Chapter 8: The discussion is presented, making sense of shared themes.

Chapter 9: The conclusions, recommendations, and limitations are presented, alongside the contributions to knowledge and implications for the practical environment, universities, OT interns, and future research.

Chapter One

Background

1.0 Introduction

This chapter examines the definition, history, features, key processes, essential characteristics, theory, and implementation of PBL. It also outlines the transition to practice period and discusses the rationale for this study.

1.1 PBL

1.1.1 Definition and history

PBL can be defined as "the learning that results from the process of working toward the understanding or resolution of a problem" (Barrows and Tamblyn 1980, p. 18), "the use of problems to focus learning" (Albanese and Mitchell 1993, p. 71), or "an approach to structuring the curriculum which involves confronting students with problems from practice which provide a stimulus for learning" (Boud and Feletti 1998, p. 15).

PBL originated in Canada in the 1960s at McMaster University, in response to widespread dissatisfaction with the traditional curriculum in medical education. This was crammed with content that was difficult to remember and out of context because students were not applying what they had learned at university. Hence, reform was needed, along with a means of expanding students' diagnostic skills (Henderson 2016; Hung and Lin 2015; Schmidt 2012; Barrows and Tamblyn 1980). Since that time, PBL has spread worldwide across a variety of fields and levels of education (Schmidt et al. 2012).

PBL has been introduced in one form or another in most medical colleges in the UK and USA; other programmes, such as the dental, social, and healthcare fields, midwifery and nursing, later adopted this approach (Matheson and Haas 2010). In the context of the Kingdom of Saudi Arabia (KSA), PBL was successfully adopted in 2001 by Qassim Medical College, the first PBL school in KSA (Al-Qaseem College of Medicine 2022). Subsequently, many Saudi medical schools have introduced the PBL approach (Bin Abdulrahman and Saleh 2015).

1.1.2 Features

The healthcare landscape is constantly evolving due to technological advancements, medical advancements, and research (Nilsen et al. 2020). Therefore, knowledge that was relevant 20 years ago may now be obsolete. Knowing how to research, to acquire and evaluate new knowledge are critical skills for all healthcare professionals (Carrió et al. 2022) and PBL is one key approach to achieving this. Due to continuous changes within the healthcare sector (e.g., quality and efficiency due to austerity, restrictions, and lack of resources), educators must develop students' critical thinking abilities (Archer 2010), enabling them to be patient-centred, compassionate, decisive, and reflective (Abey and Cole 2018). Therefore, when new students graduate, they will have gained a number of skills that are essential in the modern healthcare arena.

PBL is a student-centred approach (Ali 2019; Overby 2011), which aims to promote professional insight and prepare learners for post-qualification entry into the workforce (Biggs and Tang 2007). Adopting this approach can promote deeper content understanding and develop students' thought processes (Walker et al. 2015). Learning through PBL centres on real-life situations, not subject matter (Matheson and Haas 2010), and this encourages the transfer of knowledge and facilitates its application to relevant situations (Moust et al. 2021).

PBL differs from traditional approaches to problem-solving, as learning in PBL begins with the learners' focus on solving problems, regardless of propositional knowledge or pre-delivery of knowledge (e.g., lectures) (Delpont and Whitcombe 2010). It develops skills and knowledge through recognition of what is necessary to solve the problem (Matheson and Haas 2010); consequently, it improves the effectiveness of acquisition of basic knowledge and clinical skills (Schmidt et al. 2012).

PBL reflects modern insights that emphasise that learning should be self-directed and reflexive, involving an integrative, constructivist, contextual and collaborative process (Gwee 2009; Dolmans et al. 2005). Thus, professional education is committed to preparing students for the ambiguity that is the reality of practice by adopting a dynamic approach to learning and knowledge (Stead et al. 2010), taking account of the previously acquired learning and specific professional knowledge needed to solve the problem presented. This allows students to combine scientific concepts with

everyday experience (Savery 2015), and the different experiences of each student can be effectively used to broaden the knowledge of the entire group (Stead et al. 2010).

Early authors agreed that learning from problems is not unique, as individuals do so throughout their lives (Walton and Matthews 1989; Barrows and Tamblyn 1980). However, the challenging aspect of the PBL process is that it requires accepting responsibility to operate in a collaborative manner (Clouston 2007, 2010). Working in small groups (eight or ten) is a key feature of PBL (McLean 2016), as students are expected to develop collaboration skills for knowledge construction as they work through problems with a range of different individuals (Torre et al. 2016; Hommes et al. 2014), developing intrapersonal and interpersonal skills in a collaborative learning context (Bate et al. 2013). Groups work on real-world problems, while tutors act as facilitators, with few or no pre-determined answers (Whitcombe and Clouston 2016). Students are encouraged to take group responsibility, organize, and direct learning processes with facilitator support (Karpa and Varana 2013). This encourages self-directed and motivated learning about what they perceive is relevant to the case (Knowles et al. 2005).

To summarize, the nature of PBL requires a student-centred approach with a focus on collaborative problem-solving based on real-life situations. Students take responsibility for the problem, and share their acquired and applied knowledge with peers. This requires communication skills, explicit thought processes, reflection upon the problem-solving processes they adopt, and ultimately, learning and sharing knowledge in practice with colleagues (Stead et al. 2010).

1.1.3 Key process and essential characteristics

Numerous features of PBL are key to achieving set goals. Whilst many authors have explained the PBL process (Yew and Goh 2016; Schmidt et al. 2011; Gwee 2009; Hung 2009), Alrahlah (2016) and Bridges et al. (2012) summarized it in seven steps, whereas Campbell and Norton (2009) suggested that the ideal PBL process consists of five steps (see Table 1). However, Alrahlah (2016) explained that the ideal PBL process requires a structured and systematic approach to motivate students to address problems in a positive, systematic way. All PBL approaches share the same

basic principles, starting with students identifying the nature of the problem, and then expanding their knowledge about it and working towards an effective solution.

Table 1: PBL process

Alrahliah (2016)	Bridges et al. (2012)	Campbell and Norton (2009)
1- Problem scenario.	1-Providing information about a complex problem.	1- Form groups, explaining the fundamentals of PBL and its meaning individually; the facilitator's role is clarified, fundamental rules of behaviour are agreed and everyone's roles are emphasised.
2- Identify facts.	2- Problem investigation stage.	2- Try to understand the problem.
3- Generate assumption.	3- Formulate concepts.	3- Report the results of independent research to the group.
4- Identify knowledge gaps.	4- Break up and independently investigate identified problems.	4- Review new knowledge, reflect on what it means to the problem, identify new gaps in knowledge.
5- Engage in self-directed learning.	5- Regroup, share what they have learned, review assumptions or create new ones.	5- Continue the process until they are able to formulate a suitable answer to the problem.
6- Apply new knowledge to problem.	6- Feedback or problem reflection.	
7- Evaluation of adequacy of knowledge and problem-solving.	7- Assess understanding of the problem and progress toward the solution.	

From the table summary above, PBL is a cyclical process. Each session begins with providing information about a complex problem to student groups, who must then get more information about it. In this problem investigation stage, students usually comment on what they are going to review, think about gathered information, ask questions, and make assumptions about the root cause that might help explain the problem. Students can then formulate concepts or ideas that require additional

learning for the purpose of solving the problem (Bridges et al. 2012). Then, they break up and independently investigate the problems they have identified. Next, they regroup to share what they have learned, to review their assumptions or create new ones to gain new knowledge. After that, students undertake feedback or problem reflection. Finally, students assess their understanding of the problem and their progress toward the solution (Bridges et al. 2012). Tutors act as facilitators rather than information providers, applying self-directed learning and ill-structured problems (Savery 2015). This differs from traditional teaching approaches that follow a linear path, with the tutor ordering what is to be done and presenting detailed information about a particular topic before students solve the given problem (Alrahlah 2016).

The PBL strategy has the following characteristics: it is a learner-centred approach (bringing new information to the group through self-directed learning), involving ill-structured problems (possess multiple solutions); it is interdisciplinary (integrating knowledge from different subjects/disciplines and personal experiences); tutors are facilitators or guides; and it involves discussion of concepts and principles, students' collaboration and small group decision-making, self- and peer-assessment, and real-life problems to stimulate learning and develop problem-solving skills (Savery 2015; Gwee 2009; Barrows 1996).

1.1.4 Theory

Various psychological and educational theories support PBL, clarifying how it could benefit students during their studies and future careers. These can be explained as follows:

1.1.4.1 Information processing theory (activation-elaboration theory):

This theory comprises three aspects: *prior knowledge*, *elaboration*, and *context matching* to improve memory. Activation of those aspects improves *information recall* (Alrahlah 2016; Onyon 2012).

Activation of prior knowledge facilitates new learning by simulating connections between new and old information. In PBL, discussing clinical cases assists recall of new clinical information by building on previously gained basic science knowledge

(Onyon 2012). Discussing problems in small groups has been shown to activate prior knowledge and facilitate the processing of new information (Norman and Schmidt 2016; Schmidt et al. 1989). Furthermore, information is remembered and understood better if students have opportunities to elaborate on it (Schmidt 1983); PBL discussion provides numerous opportunities to elaborate on information and to change or enhance existing knowledge networks.

In terms of context matching, the theory posits that the greater the similarity between the situation in which something is learned and the situation in which it will be remembered, the more likely it is that retrieval will occur (Schmidt 1983). Patel (2018) suggested that the physical and social environment in which learning will be used should be an integral part of the learning itself. In PBL, rather than merely describing diseases and their manifestations, all concepts are learned in the context of a clinical condition or problem, in line with the clinical situations that students will encounter as practitioners, when they will need to recall this information when confronting real patient problems (Onyon 2012).

1.1.4.2 Situational interest theory

The situational interest theory underlying PBL states that problems generate a desire to discover additional information about the subject, leading to an increase in focused attention, concentration, and willingness to learn (Hidi and Renninger 2006). Situational interest is aroused by a captivating problem (Schmidt et al. 2011). The psychological processes underlying this desire to learn can be clarified in terms of the incongruity theory proposed by cognitive curiosity researchers (Loewenstein 1994). People seem to have a natural affinity for learning about the world when they encounter something they don't know about or that exceeds their expectations; hence, they experience situational interest, which allows them to perceive the cognitive gap between previous knowledge and what they want to know (Schmidt et al. 2011). This phenomenon has been called a cognitively induced experience of knowledge deprivation (Litman 2008), in which the experience of deprivation leads to information-seeking behaviour aimed at bridging gaps in knowledge (Litman 2005) by assimilating new information into existing knowledge structures: thus, situational interest

decreases until the knowledge equilibrium is re-established (Rotgans and Schmidt 2011).

1.1.4.3 Adult learning theory

There are many adult learning theories, which can be grouped into five main classes: self-directed learning, instrumental learning, experiential learning, situated cognition, and perspective transformation (Amstutz 1999). Andragogy is prominent amongst these self-directed theories. The term was first used by Kapp in 1833 and Knowles championed this theory in the 1980s and further elaborated the concept (Lippitt et al. 1984). Knowles (1990) considered that adults learn in different ways from children and used the term 'andragogy' (adult learning) to differentiate from 'pedagogy' (child learning).

According to Taylor and Hamdy (2013), the key difference between adults' and children's learning is that adults are differently motivated to learn. Knowles described this difference in six respects: the need to know, learners' self-concept, the role of learners' experiences, readiness to learn, orientation to learning, and motivation (Knowles et al. 2020). These aspects, in association with David Kolb's (1984) experiential learning model, allow consideration of learning and teaching strategies appropriate for adult learners: concrete experience (feeling), observations and reflections (watching), formalisation of abstract concepts and generalisation (thinking), and testing the implications of concepts in new situations (doing).

Adult learning theories describe ways in which adults assimilate knowledge, skills, and attitudes (Abela 2009). Any theory should ideally account for learning in each of these three domains (Taylor and Hamdy 2013). Knowles' (1984) andragogy assumes that adults are independent and self-directing, drawing on previous experiences, integrate learning with the demands of everyday life, prefer problem-centred learning and are internally rather than externally motivated (Lippitt et al. 1984). Knowles also suggested guidelines to facilitate adult learning: learners should identify their own learning objectives, devise strategies to use, and identify resources (Lippitt et al. 1984). Reflection is an important difference between andragogy and pedagogy theories, and can be seen to enhance adult learning by increasing motivation (Khanchandani 2001).

Rothman (2000, p. 509) describes PBL as based on “a blending of the perceived professional imperatives with the principles of adult learning”. According to Knowles (1980), the student-centred nature is a principle of adult learning where adults meet experienced people in the learning environment and thus become a source of learning for others. This enriches discussion and helps to integrate application and theory (Matheson and Haas 2010). Learners from different cultures, with different experiences, needs, backgrounds and motivations require more individualized learning and teaching experiences (Knowles et al. 2005), and PBL can challenge potential students’ perspectives and explore other possibilities (Moust et al. 2021). It is designed to encourage students’ freedom of expression, active participation, and acceptance of differences (Scaffa and Wooster 2004), and it utilises significant contextualised problems as well as real-life situations to drive learning (Caterina and Stern 2000). Students are expected to be willing to learn what they need to know to deal with a given situation (Knowles 1980). However, they need support in the early stages of PBL (Matheson and Haas 2010) to realise that the goal of learning is the learning process, and to take responsibility for their own learning and progress towards their goals (Scaffa and Wooster 2004).

1.1.4.4 Constructivism

Constructivism refers to the theory that people’s knowledge is constructed by individuals and within social communities, and that cognitive bodies or disciplines are also human constructs (Phillips 1995). It comprises two forms – social constructivism and psychological constructivism (Phillips 1997) – but both assume that meaning or knowledge is constructed or created by individuals (Kemp 2011). Biggs and Tang (2011) assert that the basic requirements for creating a constructivist process are that the course be constructively aligned: everything in the curriculum must coherent and seamless to obtain clear and explicit learning outcomes (Rust et al. 2005). Students construct knowledge through what they do, with an emphasis on integration with their prior knowledge base, and the learner’s perspective and prior knowledge determine what is learned (Williams et al. 1999).

PBL meets the requirements of constructivism, as learning occurs as a result of interaction with the environment, knowledge development is socially negotiated, and learning is stimulated by cognitive conflict (Savery and Duffy 1995). PBL also adheres to the constructivist view that individuals create and use knowledge in different ways, depending on their unique experiences (Hendry et al. 1999). The knowledge gained in the course is therefore built through collaborative discussion of all aspects of the clinical case (Alrahlah 2016). Consequently, students develop collaboration skills by constructing knowledge from a relative perspective, whereby all answers are evaluated equally, rather than through an absolute method that assumes a single truth (Whitcombe and Clouston 2010).

Constructivism is a theory that describes learning, rather than a method of teaching; thus, it does not refer to how individuals should learn, but rather describes how learners construct knowledge (Kemp 2011). However, an understanding of the constructivist underpinnings of PBL methods enables teachers to reflect on how the classroom is organized, the goals of teaching, methods adopted to promote learning, and pedagogical strategies (Kemp 2011). Constructivist approaches can benefit learning despite focusing less on direct instruction, and seem to promote, more than conventional education does, the development of professional skills (Schmidt et al. 2009). PBL encompasses some tools of constructivist education, namely problems, peers, the tutor, and self-directed learning, but this only contributes to learning if the following four conditions are satisfied (Schmidt et al. 2009).

Small group discussion and self-directed learning problems should foster students' cognitive curiosity, be relevant to their own efforts, and enable elaboration and activation of prior knowledge; teachers/facilitators should be active participants in educational conversations with learners and provide appropriate scaffolding; and sufficient time should be provided for self-directed learning (Schmidt et al. 2009). PBL will work if these conditions are met, even when teachers focus on providing instructional scaffolding rather than direct guidance.

1.1.4.5 Self-directed learning (Self-DL)

Self-DL refers to a process in which people take the initiative to identify their learning needs and set learning objectives, either with or without help from others (Knowles 1975). Self-DL is central to PBL, which emphasises developing students' ability to regulate their lifelong continuous learning (Onyon 2012; Schmidt et al. 2011; Schmidt et al. 2009; Gwee 2009; Hmelo-Silver 2004). Loyens et al. (2012) regarded Self-DL as the key feature of PBL at the student level, central to which is a sense of responsibility and influence on the learning situation (Silén and Uhlin 2008).

PBL assumes that students can study independently, without being constantly spoon-fed by a tutor, emphasising that Self-DL demands discipline (Moust et al. 2021). Self-DL is one of the outcomes of a PBL curriculum which can build confidence and reinforce the realization that students have significant prior knowledge (Bate et al. 2013). Students in PBL groups spend less time in lectures and more time on self-study, indicating that they are more self-reliant and feel more responsible for their learning (Schmidt et al. 2009). Interestingly, in most PBL programmes, students become more self-directed as the years of study progress: thus, helping them to develop the ability to organize their learning is vital (Schmidt et al. 2011).

PBL enhances self-learning skills by requiring students to manage a specific problem: they are responsible for their own learning, knowing their own limits and what they need to learn, learning to find knowledge, and evaluating and synthesizing new knowledge from a variety of credible sources (Surif et al. 2013; Braungart and Braungart 2007). Students, in groups, use the PBL process to guide Self-DL (Bate et al. 2013). Consequently, knowledge deficiencies in PBL become what are known as learning issues, which students identify during Self-DL, and then apply their new knowledge to the problem and reflect on what they have learned and the effectiveness of the strategies used (Hmelo-Silver 2004).

1.1.4.6 Self-determination theory (SDT)

SDT is a personal and motivational approach that uses traditional empirical methods within organism metatheory, which highlights the importance of humans evolving internal resources for personality development and self-regulation of behaviour (Ryan

et al. 1997). It concerns the investigation of innate psychological needs and inherent growth tendencies, which form the basis of individuals' personality integration, self-motivation, and the conditions that foster these positive processes (Ryan and Deci 2000). Ryan and Deci also identified three needs that seem necessary to facilitate the optimal functioning of natural proportions of integration and growth, and for personal wellbeing and constructive social development. These are: relatedness, competence and autonomy.

Facilitating behaviour that supports autonomy is vital to effective PBL (Cate et al. 2011). Students' perceptions of PBL may be positive because it stimulates relatedness (ability to work together in a group), enhances their sense of competence (the ability to explain things to others in their own words) and creates a degree of autonomy (through generating their own learning problems). Thus, SDT provides an interesting framework within which a more rigorous analytical approach can be taken to investigate the PBL process such as the fact that working together in a group is an essential distinguishing element of a PBL environment (Dolmans and Gijbels 2013).

According to Albanese (2000), SDT describes two different types of motivation: autonomous and controlled. Controlled motivators are represented by punishments or rewards, which can elicit a sense of anxiety or pressure. In contrast, autonomous motivators are those expressed by the individual learner, reflecting what they feel is interesting and significant, and lead to improvement in academic performance and understanding (Biggs and Tang 2011). Similarly, andragogical theory argues that students are motivated by what is meaningful for them (Whitcombe and Clouston 2016). Thus, SDT supports improved student motivation with PBL, as its learning environment promotes autonomous motivators, supports students in taking greater responsibility for their own learning and provides opportunities for choice. This is especially congruent with PBL, where interest is growing in teaching core principles using clinical cases with associated human interest (Onyon 2012).

1.1.4.7 Student interactions and small-group collaboration

Cooperative learning is described as learning where individuals realize that they will reach their goals only if other members of the group also do so (Albanese 2000).

Cooperation and interaction among students are central to PBL and elicit higher-quality problem-solving (Qin et al. 1995). Therefore, students are more likely than lecturers to understand their peers' misunderstandings (Albanese 2000). Although social interactions in PBL groups are complex (Alrahlah 2016), PBL encourages cognitive conflict among students (Onyon 2012), as conflict in discussion promotes conceptual change (De Grave et al. 1996). Accordingly, Schmidt et al. (2011, p. 795) summarized the cognitive benefits of small group collaboration in PBL as: providing a platform for developing friendships between students, enabling close contact between teachers and students, generating peer pressure that motivates students to be diligent in their self-study, and meeting the work deadlines agreed by the group.

1.1.4.8 Reasoning methods and mixed practice

According to Onyon (2012), one of the easiest ways to solve problems is to recognize patterns where the learner realizes that they have seen a similar situation before and remembers the solution. In practice, this is equivalent to finding a diagnosis from seeing a previous patient with similar symptoms. Norman and Schmidt (1992) described this as instance-based reasoning, where each student applies several cases they have seen previously to clinical problems. While experts tend to use forward reasoning (reasoning from signs and symptoms to a diagnosis), novices tend to use backward reasoning (reasoning back from the diagnosis to fit the signs) (Norman and Schmidt 2016). PBL compiles a large set of clinical cases for students to examine, and also teaches students to use backward reasoning to improve their diagnostic accuracy (Onyon 2012).

Furthermore, Norman and Schmidt (2016) described PBL as mixed practice, where curricula teach a mixture of topics, the starting point being a clinical problem. This is different from traditional approaches where subjects are taught in blocks, with defining clinical and basic sciences. While mixed practice might be used in a variety of educating methods, it is an integral part of PBL (Onyon 2012).

1.1.5 PBL implementation

Savin-Baden and Major (2004, p. 8) pointed out that "PBL is an approach to learning that is affected by the structural and pedagogical environment into which it is placed,

in terms of the discipline or subject, the tutors and the organisation concerned". Familiarity with PBL theory early in the PBL course can help alleviate some of the unexpectedness and uncertainty encountered (Galle and Marshman 2010). The facilitator is often asked to withhold their experience, as their role is to facilitate student learning rather than to provide knowledge-based content as in traditional methods (Whitcombe 2011). It is thus imperative that each study programme assess its unique approach to using PBL, and this contextual understanding can evaluate the curriculum against the needs of the facilitators and students (Spalding and Killett 2010).

Nonetheless, limitations in curriculum design and determination of learning outcomes often lead to conflict with the skills and knowledge that can be considered necessary to meet professional standards (Matheson and Haas 2010). Therefore, Whitcombe (2011) recommended that the goals and philosophy of PBL curricula be transparent so that all students can understand that PBL requires integration of various forms of knowledge discourse, regardless of their educational background. He added that evaluation methods should be clear and assessments compatible with students' learning (Whitcombe 2011). Indeed, the mismatch between an individual's expectations and the philosophy espoused by the PBL programme may create a psychological phenomenon known as cognitive dissonance (Delpont and Whitcombe 2010). Therefore, the key to success in PBL is that students recognize and accept enough principles to enable the effectiveness of the process (Whitcombe and Clouston 2010).

While PBL is a specific learning technique, there is a tremendous variety of methods of implementation, meaning that evaluation is challenging (Matheson and Haas 2010; Spalding and Killett 2010). Although PBL methodology can be used successfully in some courses or even to build the entire curriculum (Cardoso et al. 2010), there are some potential limitations. For example, it requires adequate personnel and physical structure. Therefore, early scholars such as Stern and D'Amico (2001) called for more investigation of the effectiveness of implementation and the outcomes of PBL in occupational therapy (OT) education. Studies of OT students' experiences with PBL found positive attitudes towards autonomy and competency in the OT profession (Bar et al. 2018), improved communication, collaboration and team-working skills, problem-solving, clinical reasoning, information-sharing (Seymour 2013; Scaffa and Wooster

2004; Reeves et al. 2004; Connolly and Donovan 2002; Hammel et al. 1999), knowledge application, and preparedness to adapt to the modern context (Whitcombe 2013a). However, the implementation and effectiveness of PBL have not yet been studied in the context of OT in KSA.

1.2 Transition to practice

According to Morley (2006), an efficacious transition from student to practitioner is important in becoming a qualified clinician. Occupational therapists (OTs) must be able to utilize theory in practice; but they need to understand this theory before they can apply it in their needed environment (Boniface and Seymour 2011). However, the transition into practice can be daunting (Moir et al. 2021), and newly graduated OTs face well-documented difficulties when they move to practice, and initially feel overwhelmed by being responsible for their decisions (Turpin et al. 2021). Therefore, novice OTs may begin practice with a mixture of fear and excitement, and face stressful or unpleasant experiences before settling into professional practice.

Baxter (2018) argued that despite academic efforts, nothing can truly prepare an OT for the reality of being a qualified, independent professional in a crowded health and social care arena. However, OT departments must ensure that novice graduates conduct their roles appropriately while building professional and clinical skills and developing experience (Turpin et al. 2021). Whilst the necessary skills must be acquired to meet the requirements of increasingly complex healthcare systems, it is essential for students to pass through the transition to practice successfully and confidently (Westcott et al. 2018). Indeed, the learning process only really starts when OTs move into practice (Pollared 2018), and the vital transition from student to practitioner involves becoming independent and responsible, which usually involves the acquisition, discovery, use and refinement of professional knowledge and skills (Westcott 2018).

Academic courses are assumed to focus primarily on theoretical knowledge and technical expertise; recent graduates or students are expected to meet the same standards as experienced professionals (Kelly and Thornton 2018). However, while traditional programmes aimed to prepare students to become qualified practitioners,

the reality shock at the start of practice remains a problem not only in the OT field, but also for other healthcare practitioners (Morley 2009). Increasing numbers of new OT graduates are entering practice, but they feel that they are not fully prepared (Moir et al. 2021; Gray et al. 2012; Doherty et al. 2009; Devine 2006). It is not entirely feasible to prepare them through university training alone, as understanding the challenges new graduates face and supporting their transition is vital (Moir et al. 2021).

The transition from the role of student to responsible practitioner is a stage of intensive self and professional development (Liddiard et al. 2017; Nayar et al. 2013; Gray et al. 2012; Robertson and Griffiths 2009; Morley 2007; Toal-Sullivan 2006). During this period, newly graduated OTs must be able to integrate clinical thinking and practical knowledge (Seah et al. 2011). However, numerous studies with healthcare professionals have found high rates of work-related stress, burnout, compassion fatigue and vicarious trauma (Grant and Kinman 2018, Clouston 2015, Beddoe et al. 2013), which might be particularly severe when students move to practice. Therefore, some researchers have called for a facilitated transition experience for newly qualified OT students, as they may enter practice without considering some of the challenges they may encounter (Liddiard et al. 2017; McCombie and Antanavage 2017). Moreover, Kelly and Thornton (2018) believe recent graduates should use more experienced practitioners as role models and use reflection as a tool to consider how they might play their role.

Earlier researchers found that the level of clinical efficacy of newly graduated OTs indicates that they are not prepared, insufficiently qualified and need more clinical skills (Tryssenaar and Perkins 2001; Björklund 2000; Adamson et al. 1998; Parker 1991). More recent researchers found that when OTs move to professional practice, they sometimes feel unprepared, generally experience similar difficulties in their early years of work and need more time to trust their skills and knowledge (Turpin et al. 2021; Liddiard et al. 2017; McCombie and Antanavage 2017; Sim and Mackenzie 2016; Murray et al. 2015; Maringer and Jensen 2014; Nayar et al. 2013; Gray et al. 2012; Seah et al. 2011; Robertson and Griffiths 2009; Morley 2007; Morley 2006; Toal-Sullivan 2006).

Difficulties include professional identity (Toal-Sullivan 2006); using research evidence (Morrison and Robertson 2016); mismatches between OT values, beliefs and organisational expectations (Murray et al. 2015); lack of practical experience (Glenn and Gilbert-Hunt 2012); reduced role clarity (Robertson and Griffiths 2009); perceived lack of intervention skills (Seah et al. 2011; Hodgetts et al. 2007); unmet support needs (Morley et al. 2007) and greater susceptibility to burnout and job stress (McCombie and Antanavage 2017). Thus, there are several factors that can affect the transition period, and it is necessary to develop and improve competencies while continuing education and research.

Several strategies have been suggested to overcome transition difficulties, including support from peers and colleagues (Toal-Sullivan 2006); supervision, support and education to facilitate clinical reasoning and professional identity (Moore and Fitzgerald 2016); creating graduates who are able to reconstruct and contextualise knowledge (Robertson and Griffiths 2009); and provision of specific programmes to help transition (see Chapter 3). However, access to this assistance may vary by workplace (Moir et al. 2021). To illustrate, studies have found that new OT graduates working in the government sector were able to access substantial support and supervision within their workplaces to help develop knowledge and clinical skills (Turpin et al. 2021; Morley et al. 2007), whereas those in rural practice received minimal formal supervision but utilized informal support to increase their confidence (Steenbergen and Mackenzie 2004). Therefore, each context is supposed to study new OT transition experiences to overcome their difficulties of transition and to access support needed according to the workplace.

Summary

New graduate OTs might find transition stressful despite academic efforts to prepare them for practice (e.g., PBL knowledge and skills). With increasingly complex healthcare systems, workplace support might not always be available; novice OTs might experience challenges in their transition, and this might impact their ability to undertake clinical work with clients. Hence, it is essential to explore the experience of recent graduate OTs to facilitate their transition, provide appropriate OT services, and overcome clinical challenges.

1.3. Rationale of study

1.3.1 Impetus for the study

There were two main factors providing the impetus for the study, firstly, my personal motivation, and secondly, my professional motivation, these will now be discussed in turn:

Firstly, I was an internship student before graduating, and I faced many challenges during my transition to practice (e.g., lack of experience and practical skills). Thus, I undertook a phenomenological qualitative study for my master's dissertation to study the experiences of OT interns in KSA as they transitioned from students to practitioners (Abaalkhayl 2019). While the results of my research showed that OT interns faced both facilitators and challenges during their transition, I found that students whose studies were based on PBL had more skills than their peers from other universities, faced fewer challenges during transition, and their transition experience tended to be more positive. Thus, I wanted to study this phenomenon in more depth.

Secondly, as a PhD student, my professional motivation is important, and I am planning to work at a Saudi university after obtaining my PhD. Curriculum design is important in any university in terms of adopting the teaching method (whether traditional or PBL), as this will reflect on the students during and after university, especially in their being qualified and ready to practice in the context of KSA. Therefore, this study focuses on OT in the KSA context, identifying enablers and barriers, how PBL teaching methods were delivered, how PBL benefits students in their internship, and how students developed the necessary practice skills to facilitate and improve their transition.

1.3.2 Significance of study

To support OT students' transition into practice in the context of KSA, there is a need for more studies related to the transition period for OT intern students in KSA, as well as understanding how the curriculum (e.g., PBL) prepared students for practice, and this study will help me do that. Moreover, the PBL has been recognised across the world as being suitable for the health and social science curricula (Sadlo 2014), however; its impact on improving OT practice in KSA has not yet been realised. Consequently, I decided to explore OT students' experiences during the internship

period, including the enablers and barriers factors, and research how PBL affected OT interns.

Summary

This chapter has covered basic information about PBL and the transition to practice and discussed the rationale for this thesis. It found that PBL has many positive features for students, and that it requires a structured approach. Essential characteristics of PBL and various supporting psychological and educational theories PBL were identified. This chapter also discussed transition to practice and how this can impact on newly qualified OTs, highlighting some suggested strategies to overcome transition difficulties. The next chapter will focus on the study setting and OT in KSA.

Chapter Two

Setting and OT

2.0 Introduction

This chapter describes the setting and OT service in KSA, including published articles, OT in KSA universities, and an overview of the internship programme in KSA.

2.1 OT in KSA context

KSA is a country in the Middle East, and is the setting for this research. The Saudi government has adopted a vision (or long-term strategy) for the coming decades, which, if properly completed, will ensure major improvements in the healthcare sector (Elsheikh et al. 2018). OT is an essential part of healthcare, comprising a multidisciplinary group approach which focuses on facilitating participation in meaningful occupations (Atwal et al. 2006; College of Occupational Therapists 2005). In the Middle East, according to Darawsheh (2018) and AlHeresh and Nikopoulos (2011), OT was first introduced in Jordan in 1986, and then spread to other Middle Eastern countries. OT is a new field of rehabilitation in KSA, compared with most Middle Eastern countries. There is little information in the literature regarding the history of OT in KSA (Alshehri et al. 2019), but it was first established in 2008 at King Saud University (Malkawi et al. 2021).

According to Alshehri et al. (2019), the total number of OT practitioners in KSA is unknown, and few OT undergraduate programmes are available. There are no programmes at graduate or postgraduate level. However, an informal study found that OT was practiced in three community centres and in 12 hospitals; and nearly 300 students had graduated from the OT departments of three universities (Abaalkhayl 2019). Later, Malkawi et al. (2021) indicated that OT is a relatively new profession in Arab countries, especially in KSA, where there are just eight bachelors' programmes.

According to Meny and Hayat (2017), awareness about the implications and methods of OT specialization is scarce, and this could be a source of potential barriers in identifying eligible patients and their subsequent referral. However, OT is a relatively new field worldwide, not just in KSA, and little is known about its implications, role, and goals (Olaoye et al. 2016; Jer-Hao et al. 2012; Tariah et al. 2012). Although several

recent studies have been published highlighting OT educational programmes, therapists and awareness, such knowledge remains limited or absent in KSA (Meny and Hayat 2017). Nonetheless, OT in KSA is rapidly evolving, as healthcare systems continue to evolve. OT in hospitals covers several departments, including orthopaedics, promotion of rehabilitation and health, neuro-surgical and neuro-medical cases, and therapy for disabled people.

While countries such as Australia, the USA, the UK, and Canada have all been registered members of the World Federation of Occupational Therapists since 1952 (WFOT 2022), The KSA OT association was established much more recently established and became a full WFOT member in 2016 (Alshehri et al. 2019). According to statistics from the Ministry of Health (MOH) in KSA (MOH 2017), the total number of cases seen by OTs in its medical rehabilitation centres reached 38,228 cases in 2017. While this data is only valid for MOH and did not include data from the private health sector, the number of treatment sessions increased from 54,419 in 2012 to 77,496 sessions in 2017 for disabled children in general. This indicates increased demand for OT services in KSA in the future.

2.2 Published articles

Until May 2022, just nine studies had been published on OT in KSA. Four cross-sectional surveys aimed to assess knowledge about OT among health care professionals (HCP) in Makkah, a city in west KSA (Meny and Hayat 2017), in Al-Ahsa, a city in east KSA (Vadivel et al. 2021), among medical and health science students in KSA (Sarsak 2020) and among people in KSA (Meny et al. 2021). The result of those studies showed that HCPs in KSA have poor knowledge about OT in general (49.35%, SD=7.36), with physicians having the highest percentage of knowledge about OT in Makkah (51.97%) (Meny and Hayat 2017); HCPs in Al-Ahsa had moderate to minimal knowledge about OT (Vadivel et al. 2021), whereas the general public had poor knowledge about OT and its applications, even though some participants held higher education degrees (Meny et al. 2021).

While Sarsak's (2020) study found that 83.2% of respondents agreed that OT plays a vital role in interdisciplinary rehabilitation teams, OT was not clearly understood, as

healthcare students were not well educated about its benefits and services, with only 59.1% having heard of OT; 18.8% were uncertain about the main domain of OT, 39.3% were unsure about the difference between OT and PT, and 13.2% did not know where OTs work; 67.3% of the students were dissatisfied with their knowledge of OT and 89.8% showed interest in learning more about OT. Thus, previous findings illustrate that HCPs in Makkah and Al-Ahsa, medical and health science students and the general public in KSA lacked adequate knowledge about OT's roles and implications, which might impact their understanding of the specific services OT provides. This suggests it is necessary to educate HCPs and the general public in KSA, in order to improve the service for patients needing OT throughout KSA and subsequently their quality of life.

Another cross-sectional study aimed to discover OT practitioners' decision-making preferences, awareness, and attitudes towards evidence-based practice (EBP), and to investigate barriers limiting EBP implementation (Alshehri et al. 2019). Data was collected through an online survey, whose response rate was low (n=89 of 144 KSA OT participants, 61.8%), attributed to the small community of OT practitioners in KSA. While the only significant association found was between OT practitioners' awareness and their education level, the main barrier to implementing EBP involved insufficient teaching (45%), inadequate resources and funding (42.7%), and lack of skills and research knowledge (38.2%). Although the study concluded that the attitude of OT practitioners toward EBP implementation was positive, awareness regarding the use of EBP was relatively low, indicating a gap in how OT practitioners understand and apply EBP in KSA. Therefore, the authors recommended including EBP in the undergraduate and postgraduate curricula.

Al-Shahry et al. (2018) and Tariah et al. (2022) undertook different cross-sectional studies to assess the satisfaction of 81 OT and PT interns regarding internship training in Riyadh, the Saudi capital, and to identify the job satisfaction of 48 OT workers in Riyadh. Although Al-Shahry et al. (2018) found high satisfaction among OT and PT interns in their study, OT interns had a lower satisfaction rate (78.50%) than PT interns (83.05%) across all domains. While most OTs reported high overall satisfaction in Tariah et al.'s (2022) study, including satisfaction with co-workers, autonomy, and care provided to clients, interns in Al-Shahry et al.'s (2018) study reported high satisfaction

with preparation (87%), internship posting, such as supervision and co-workers (88%), and professional skills and knowledge (90%). However, OTs were dissatisfied with their salary compared to their work efforts, lack of opportunities for career advancement, and lack of reimbursement for continuing education (Tariah et al. 2022) and interns reported dissatisfaction with evaluation and feedback (48%) (Al-Shahry et al. 2018). Therefore, the overall satisfaction levels of OT interns and practitioners seem high in KSA, and efforts should be directed towards maintaining these levels while resolving areas of dissatisfaction, such as salaries and interns' evaluation and feedback.

Additionally, a qualitative study by Alodan and Squire (2022) investigated the emerging factors influencing mental health (MH) related OT practice in KSA from OTs' and psychiatrists' viewpoints. With nine participants using semi-structured interviews, the authors found four themes: OT's professional identity in KSA; perceptions about MH-related OT practice; the promotion of OT services within Saudi MH; and challenges toward implementing OT services in psychiatry. Finally, Almubark et al. (2022) developed a specialty-specific telehealth practice guide (documented in their article) for rehabilitation practitioners, including OTs. The authors believed that their guide would enable understanding of core telehealth clinical principles and aid their provision in KSA, and could also be implemented in other Middle Eastern countries.

2.3 OT in Saudi universities

According to Al-Heizan et al. (2023), there are eight institutions in SA that offered an OT undergraduate (BSc) degree, none of them offered postgraduate programmes or diploma degree at time of writing. Those institutions are: King Saud University started in 2010 (Riyadh, Central region); Princess Nourah Bint Abdulrahman University started in 2013 (Riyadh, Central region); King Saud Bin Abdulaziz University for Health Sciences with three branches, started in 2018/2017/2012 (Alhafouf, Eastern region/ Jeddah, Western region/ Riyadh, Central region respectively); Batterjee Medical College and King Abdulaziz University started in 2019 (Jeddah, Western region); Northern Border University started in 2022 (Arar, Northern region) but inactive at the time of study.

However, during selecting participants in 2020, there were three universities teaching OT, with their students undertaking internship programmes. During a five-year period (in addition to the internship stage), students must pass all courses before beginning the internship stage. After completing their internship, students must obtain a license to practice OT from Saudi Commission for Health Specialties before being considered practitioners. The next table will provide overviews of the curricula for these three universities (Table 2) and the reason for choosing this dissertation setting will then be set out.

Table 2: OT courses in KSA universities

Semester/ universities	First university	Second university	Third university (Setting)
First semester	Computer Skills, Introduction to Mathematics, Communication Skills and English Language (1) (T:15H)	English for health programs 1, Islamic culture 1, Physics for Health programs, Biology for Health programs, Math for Health programs and Medical Technology (T:18H)	English Communication Skills Level 1, English Training and Writing Level 1, English Reading and Terminology Level 1, Arabic Language Skills Level 1, Islamic Culture Level 1 (T: 18H)
Second semester	Biostatistics, Biology, General Physics, Introduction to Organic Chemistry and English for Health purposes (T:18H)	English for Health Programs 2, Islamic Culture 2, Arabic Composition, Introduction to health Profession, Human Biology for Health Programs, Chemistry for health programs and Introduction to Biostatistics (T:19H)	English - Communication Skills - Level 2, English - Training and Writing - Level 2, English - Reading and Terminology - Level 2, Biology for Health Sciences, Chemistry for Health Sciences, Physics for Health Sciences, Arabic Language Skills Level 2 (T: 18H)
Third semester	Occupational Therapy Methods, Fundamentals of Anatomy and Physiology, Computer Principles, Human Anatomy and Fundamentals of Emergency Care (T:14H).	Professional issues (+16 hours of fieldwork), Foundations of Health, Psychology for Occupational Therapy, Human Structure and Function 1(T:15H).	Medical Terminology, English Grammar and Advanced Writing, Reading and Advanced English Terminology, Biochemistry, Biostatistics, Behavioral Science, Computer Science and Medical Information and an optional research course (T: 18H)
Fourth semester	Clinical Physiology, Human Functional Anatomy, Methods of Occupational Therapy (1), Introduction to Clinical Practice of Occupational Therapy, Medicines, Rehabilitation Psychology, and Methods	Foundation of Occupational Therapy Practice, Occupational Science, Human Development Across the Lifespan and Human Structure and Function 2 (T:15h).	Anatomy and Physiology, Pathology Principles, Fundamentals of Pharmacology, Education for Health Professions, Medical Ethics and Patient Safety and the last Introduction to

	of Evaluation in Occupational Therapy (T:15H)		Occupational Therapy (T: 18H)
Fifth semester	Medical jurisprudence, nervous system anatomy, functional therapy methods - 2, neurophysiology of an occupational therapist, occupational therapy methods, pathology and physiology (T:17H)	Occupational Performance, Capabilities and Components, Scenario-Based Learning 1, Biomedical Science, Fieldwork 1(120 Hours: 3week * 40 hours) and Islamic Culture 3 (T:15h).	The use of curative methods to develop manual skills in occupational therapy, concepts in rehabilitation science, evidence-based application, professional work development, human movement principles, the clinical process of occupational therapy and finally teaching in application (T: 17H)
Sixth semester	Clinical practice for occupational therapy (1), Clinical practice in occupational therapy for children's diseases, Recreation in occupational therapy, Human growth and development, Methods of medical rehabilitation, the medical aspects of disability and disease (T:16H)	Enabling Occupation 1: Performance Changes, Scenario- Based Learning 2, Fieldwork 2(120 Hours: 3week * 40 hours), Skills for Evidence-based Practice 1, Islamic culture 4 and Language Skills (T:18H)	Occupational therapy for orthopedic conditions in the upper limb, kinesiology, concept of functional performance, enhancing functional performance of chronic conditions, neuroscience, field work education 1 and finally the research methodology 1 (T: 18H)
Seventh semester	Introduction to Biomechanics, Clinical Practice for Occupational Therapy (2), Occupational Therapy for the Elderly, Clinical Practice for Occupational Therapy (3), Psychiatry in Occupational Therapy and Advanced Theories of Occupational Therapy (T:17H)	Enabling Occupation 2: Performance Challenges in Population Health, Scenario-based Learning 3, Health Promotion, Skills for Evidence-based Practice 2, Participatory Community Practice 1: Development, Participatory Community Practice 2: Fieldwork (140 hours: 2days/wk×10wks) (T:20 H)	Introduction to psychological occupational therapy, neurological rehabilitation for children, obstacles to mental development, behavioral kinematics, group intervention in occupational therapy, comprehensive rehabilitation of cases, field work education 2 and research methods 2 (T: 18H)
Eighth semester	Biological Subjects, Selected Clinical Topics (1), Occupational Therapy Management and Ethics, Clinical Practice for Occupational Therapy (4), Shorani Therapy, Ionizing Imaging and Reading, Independent Study (1) (T:18H).	Transition to Practice, Participatory Community Practice 3: Implementation, Participatory Community Practice 4: Fieldwork 3(140 hours:2 day /week×10 weeks), Emergency Life Support Techniques (T:14H)	Adult Neurological Rehabilitation, Assistive Technology, Multiple Case Clinical Practice, Occupational Therapy Services Assessment, Society Needs Exploration in Occupational Therapy and finally Field Work Education 3 (T: 16H)
Total credit hours	Out of the 136 credit hours, 33 credit hours for unified program for health colleges, 97 credit hours for department required	Out of the 134 credit hours: 88 hours OT program requirements, 12 hours university requirements, 31 hours	Out of the 141 credit hours: 105 hours OT program requirements and 36 hours health colleges requirements.

	courses, rest credit hours for Islamic courses and for Arabic Language courses.	health colleges requirements, 3 hours college requirements.	
Internship period	One full year	One full year	One full year
Students gender	Male / Female	Female	Male / Female

The first university established an OT department and started teaching a bachelor's degree in OT in 2010, and its current curriculum was developed in 2015. To obtain a bachelor's degree, students must successfully complete the total credit hour requirements specific to the programme (136, including 97 for the OT department's required courses). However, this university uses teaching-based methods, and students often depend on the internship training year to gain practice experience. This university does not use PBL based or hybrid PBL. Therefore, its students were excluded from this study.

The second university's OT department was established in 2012-2013, and its curriculum was developed in 2012. To obtain an OT bachelor's degree, students need to complete five years, divided into four years of school, with each year divided into two levels involving 15 weeks of study. Students begin the internship programme in the fifth year, after completing all specialized courses and university requirements. This study plan consists of 134 hours, including 88 hours of OT programme requirements. OT students at this university also undertake 520 hours of fieldwork and a 'transition to practice' module, which facilitates their transition to their internship programmes. Thus, it seems that students from this university have more practical experience before starting their internship compared to those at the first university, whose curricula lacks sufficient practical training for the transition period. The curriculum of the second university includes three courses of Scenario-Based Learning (SBL). The programme was adapted from Monach University in Australia to be suitable for KSA students (Farnworth et al. 2013, 2014). However, this university provides lectures for female students only: to avoid gender bias, I decided not to collect data from this university.

2.3.1 Setting: Abdullah University (pseudonym)

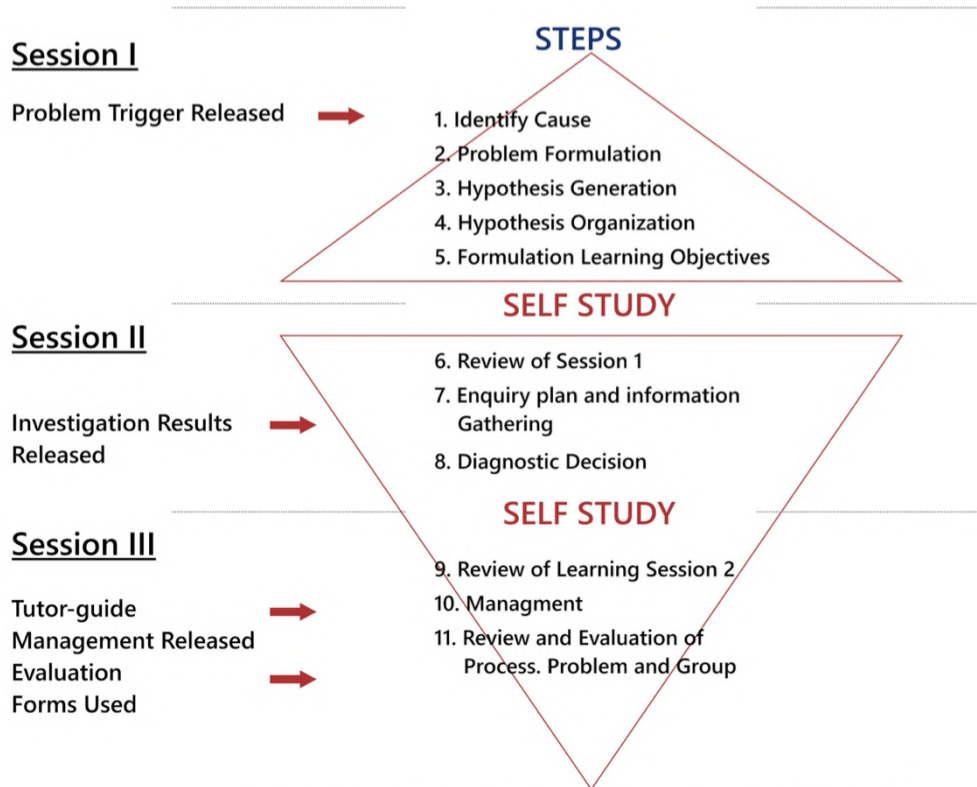
This programme is offered by the College of Applied Medical Sciences and aims to qualify students specialising in OT through a method characterised by excellence in the application of curricula stimulating critical thinking and evidence-based practice. The programme duration is four years, in which the student studies courses that include basic medical sciences. The OT curriculum is based on the University of Oklahoma model in the United States, and has been modified to fit the needs of Saudi society. The study plan comprises 141 hours, and the first group started in the 2014/2015 academic year.

The curriculum offered by the College of Applied Medical Sciences in the OT department is divided into two phases and lasts four years, in addition to a year of internship. In the first stage, comprising two preparatory years, students must pass four semesters, which are taught to all health sciences students. The second two-year stage is considered the specialisation stage, where students study the OT specialty in more depth and intensity, starting from the basics of specialisation and ending with professional practice in the internship year.

OT students at this university undertake different models to fulfil their needs for OT qualification. Faculty members explained that PBL is used as a method for teaching some subjects, and that they follow specific steps, which are fully explained in Appendix 1. To clarify, although the OT curriculum is based on the University of Oklahoma model, PBL in this programme is based on the College of Medicine, which opted to adopt a hybrid curriculum offered by Sydney University Medical Program (PBL Booklet 2013). It offers PBL as one of the main educational strategies, along with lectures and other teaching and learning strategies. PBL is extended to a full problem-solving cycle, from enquiry, through investigation and diagnostic decision-making, to management and prevention of the problem (PBL Booklet 2013). The process is covered in three tutorial sessions and follows eleven steps, which focus primarily on the process of implementing these steps (Figure 1). The Eleven Steps have been packaged in three sessions but the distribution of steps in the three sessions might differ in some cases. Groups can respond in different ways to a given problem and these differences can be reduced if the eleven steps are followed in a similar fashion

in all the groups (PBL Booklet 2013). More information on how PBL works is presented in Appendix 2.

Figure 1: The eleven steps of PBL



2.4. Internship programme and transition period

Internship can be defined as “a form of experiential learning that empowers students to integrate knowledge and theory learned throughout the curriculum with practical application and skills development in a professional setting” (Wilson 2018, p.4). The internship period allows interns to acquire skills related to their field of study, practice, and application, as well as skills acquired from work experience, which can be beneficial for the future. The internship programme has been important for medical students in KSA since its inception in 1990, when healthcare officials, who had passed different programmes (not the internship period), realised the importance of preparing an educational exercise to hone trainees’ skills and knowledge before they started work as practitioners (Health Career Connection 2020).

Many different programmes have been developed worldwide including placements, preceptorships and apprenticeships which support recently qualified OTs to overcome difficulties, enhance their professional identity, and increase their efficiency (Morley 2007). The internship model in KSA differs from some countries, as it is considered a mandatory year after completing four years university studies (Al-Shahry et al. 2018). After successful completion of needed credit hours, students will start internships for 8 hours a day for one year (47–48 weeks) in different hospital settings and health centre-based settings (e.g., adult/child neurology, orthopaedics, acute care, outpatient care, intensive rehabilitation, hand therapy and burns). This should be accepted by the OT department with co-supervision between the college and the hospital (Althaqafi et al. 2019). At the end of this year, the student will get a certificate to practice the profession. Thus, internship students are not yet qualified, must undergo a period of internship in a supervised hospital, and are not yet classified as therapists; they must complete this internship to obtain their bachelor's degree (Bahari et al. 2022).

Depending on the quality of internship and the suitability of the environment, the internship period is the time when the student converts information and knowledge into practice (Bahari et al. 2022). Internship students also acquire more clinical knowledge and skills and communicate with most other medical specialities (Bahari et al. 2022; Alharbi and Alhosis 2019), which will enhance their transition to their new role as practitioners (Wallace 2016). Consequently, internship plays a key role in improving professional learning, communication and teamwork, applying theoretical learning in real life, gaining more experience and identifying strengths and weaknesses, hence increasing internship students' ability to deal with various situations in their future careers (Phua et al. 2017; Sasnett and Ross 2016).

In the KSA context, the Saudi Health Sector Transformation Program aims to boost the OT workforce as part of Saudi Vision 2030 (Saudi Ministry of Health 2019). Interns' experiences in OT might be different from other health fields, as the OT programme is so new. Internship differs from other periods (e.g., preceptorships), as it is paid, the students are not yet qualified, it is a supervised period, and it is mandatory in order to obtain a bachelor's degree (Abdulghani et al. 2014). Although the advantages of internship programmes are important, early studies reported that there was insufficient preparation for intern students, as students believed that they did not develop the

required skills (Hannon 2000). Indeed, the gap between what the training institution provides and what the interns expect or want is a major issue facing interns in health and medical professions, and the internship year is associated with considerable stress (Al-Muhanna 2009). However, most interns in KSA believe that their knowledge of their field of specialisation is improved by their internship (AlThukair 2014).

According to Aboshaiqah (2016), the internship programme in nursing is a one-year clinical training programme integrated into the BSc in nursing to facilitate the transition into professional roles and supply extensive clinical training. Intern nurses start with limited experience of real work, and use the internship process to enhance their competencies in providing high quality nursing care under the guidance of supervisors. Thus, the internship programme positively affects the skills of nursing interns in dealing with actual patients in the clinical setting (Aboshaiqah and Qasim 2018). However, it will be useful to explore the studied experiences of students during this period in KSA.

Bahari et al. (2022) conducted a qualitative descriptive study with instructors and sixteen KSA nursing interns to explore the factors that contribute to successful clinical internships in KSA. The programme curriculum, contribution to the nursing board exam and the hospital internship programme were identified as facilitating factors, whereas the long duration of the programmes, exploitation, lack of incentives and lack of self-confidence were barriers to success. Consequently, they recommended strengthening internship programmes and providing appropriate support to nursing students (Bahari et al. 2022).

Alharbi and Alhosis (2019) explored the difficulties and challenges encountered by internship nursing students and found that they suffered from inappropriate treatment by clinical staff, being ignored or exploited, with poor communication. The interns felt lost due to a lack of willingness to teach from clinical thinking and a gap was identified in the organisational structure in terms of the lack of training departments in some hospitals. Further, some nursing interns were shocked by the reality that some employees had unsatisfactory knowledge and skills in the clinical field (Alharbi and Alhosis 2019).

Althaqafi et al.'s (2019) study aimed to explore the clinical practice experiences of nursing interns at different hospitals in KSA. The most significant influencing factors in nursing interns' clinical practice were support of the nursing staff, hospital orientation programmes, educational programmes, mentorship programmes, and the level of responsibility afforded to nursing interns. However, some challenging factors were highlighted, such as healthcare professionals' ignorance, patient culture, time management, unfair treatment, and being involved in non-nursing work (Althaqafi et al. 2019).

Agha and Aldossary (2016) evaluated the perceived satisfaction levels of PT interns and faculty members regarding PT internship. Their results were similar to those of Al Shahry et al. (2018), indicating overall satisfaction with the internship programme. However, this study concluded that faculty and students' satisfaction with the internship programme was related to evaluation and feedback on the assistance received from the institution and the experience of internship.

In the context of OT, only one article was published, examining the experiences of PT and OT interns (Al-Shahry et al. 2018). The study indicated that the satisfaction rate of OT interns was 78.50%, compared to 86.15% for PT interns, suggesting that OT interns faced more challenges and were less satisfied than PT interns. Thus, there is a need to examine the lived experience of OT interns in KSA, including the enablers and barriers that they face.

Summary

This chapter first examined the setting and OT service in the context of KSA. It then covered published articles on OT and its provision in Saudi universities, and explained the selection of Abdullah University as the study setting. Finally, it looked at internship programmes as transition periods in the context of KSA. It found that OT is still a developing field, with few articles published in the Saudi context and just one examining OTs' experiences of internship. It also found that HCP, medical and health science students, and the general public in KSA, have limited knowledge about OT. Moreover, KSA students in general face some challenges during the internship period, but most OT interns and practitioners have high overall satisfaction levels. Therefore, there is a need for more investigation of OT in KSA context, where understanding OT

internship experiences and the impact of education methods on practices consider crucial for improving OT education strategies and addressing growing demand for OT services in KSA. The next chapter will provide the literature review for this study.

Chapter Three

Literature Review

3.0 Introduction

This chapter first justifies the use of a scoping review, including its purpose, reasons, and methodological framework. Then, I move to the literature review and cover the scoping questions, literature search strategy, inclusion and exclusion criteria, study characteristics, and results (themes). The studies reviewed are tabulated in Appendix 4.

As a former master's student and junior PhD researcher, I was aware of the apparent lack of literature in this field of study, particularly in the context of Saudi Arabia. Therefore, an initial electronic search was conducted from October to December 2019 to identify the gap in knowledge by exploring OT internship experiences regarding the influences of PBL in the transition period. Initial searching used a variety of relevant words in five databases to obtain the most appropriate and comprehensive review of the literature (Appendix 3). However, the database results were discouraging as I expected, revealing a lack of research regarding OT and PBL in KSA. Just four studies were found that investigated OT students' experiences regarding the impact of PBL in practice (Appendix 3). Accordingly, and to situate that gap in the wider literature, the literature review comprises a two-fold search strategy. The first used the search terms 1, 2, and 3 (Table 3), which examines OTs' lived experiences of transitioning to practice, focusing on enablers and barriers, preparedness, and specific programmes they utilised during OT practice transition. The second used search terms 4,5 (Table 3), which covers the impact of PBL on practice for OTs and other HCPs. However, I did not expect that the research process for this thesis would require so much time in developing different ideas, considering issues, developing analytical skills, complex data management skills, writing skills, and decision-making.

3.1 Scoping review

Scoping reviews follow a structured process similar to systematic reviews but have some key methodological differences and are performed for different reasons (Peters et al. 2020; Colquhoun et al. 2014; Levac et al. 2010). According to Munn et al. (2018), scoping reviews are valid when systematic reviews fail to meet users' requirements,

offering distinct indications compared to systematic reviews. They are ideal to cover a body of literature or to define the scope of a specific topic and give a clear indication of the volume of literature available and an overview (detailed or broad) of its focus (Munn et al. 2018). Thus, the general purpose of applying scoping reviews is to map and identify the available evidence (Anderson et al. 2008; Arksey and O'Malley 2005).

Arskey and O'Malley (2005) gave four reasons why a scoping review might be conducted, and offered a framework for such reviews. Later, Munn et al. (2018) built upon these indicators and proposed six purposes for conducting a scope review. In this thesis, three reasons were identified: to identify the types of available evidence in the OT/HCP field; to examine how research is conducted on a certain topic or field (identifying useful tools to investigate the design and conduct of research on PBL, transition, and OT); and to identify key characteristics or factors related to a concept (PBL impact, transition, enablers and barriers).

Although it has been argued that scoping reviews provide no assessment of methodological limitations or bias (Lockwood and Tricco 2020; Munn et al. 2018), Peters et al. (2020) clarified that evaluations can be made if specific requirements are met due to the review's objective. Thus, I applied a critical appraisal tool. Moreover, scoping reviews should always have a clearly stated objective or aim (Lockwood and Tricco 2020). Consequently, I carefully considered the indications discussed in Munn et al.'s (2018) study, identifying the question I aim to answer early and the desired purpose of this thesis. For rigorous, transparent, and trustworthy results, I have clearly set out each step taken for this scoping review. I applied Arksey and O'Malley (2005) methodological framework, which has five stages: identifying the research question, identifying relevant studies, study selection, charting the data, and collating, summarizing and reporting the results.

As recommended by Peters et al. (2020), I used a charting table to record key information such as the title of the study, author(s), year of publication, country, aims, methodology, methods, sample size, results or findings, related codes, and limitations. This data extraction tool provided a descriptive and logical summary of the results that aligns with the question and objectives of the scoping review. While there is often no formal synthesis in scoping reviews, I compiled a summary of the review's findings

using simple thematic analysis (Lockwood and Tricco 2020; Cooper et al. 2019; Tricco et al. 2016).

3.1 Literature review.

This scoping review addresses the lived experiences of OTs when they move to practice. It describes OTs' experiences when they first move to practice, the enablers and barriers that they face, whether they are prepared for practice, and any specific programmes that help them during practice. This part also discusses the scoping review relating to OTs, HCPs and PBL. It describes the impact of PBL on practice for OTs and HCPs, identifying how different aspects of the PBL course influence their practice. Thus, this review was guided by the following questions, which helped to build this chapter:

- What is known about the lived experiences of OTs when they move to practice?
- What are the enablers and barriers that OTs face when they move to practice?
- What is known about the lived experiences of OTs/HCPs regarding the influences of PBL when they move to practice?
- In what ways does the PBL course influence OT/HCP students' transition period or their practice?

3.1.1 Literature Search Strategy

An electronic search was conducted from June 2020 to January 2021 (updated in July 2022). Initial key terms were used to conduct a comprehensive literature review (Table 3). To ensure transparency, I searched relevant literature using Google Scholar to get an overview of the research topic. After that, a Cardiff librarian provided assistance, expanding the scope to include healthcare research and ensuring access to relevant studies. Six databases were used: Medline (Ovid) (limited to English language and full text), CINAHL (EBSCO) (limited to English language and full text), Scopus (limited to English language, specific date, full text), AMED, OT-seeker and Google Scholar (with manual searching of citations and reference lists) (Appendix 3/5). AMED was recommended by the Cardiff librarian due to its usefulness for HCPs seeking information on related subjects in their field. The results were very encouraging, as a total 4986 studies were found (Table 4). However, after reading the

titles and abstracts, only 149 studies were relevant to the inclusion criteria below. The next step was to read each study in full to select which ones met the full inclusion and exclusion criteria.

Table 3: Search Terms

Search Terms 1
Practice, Transition, Move to practice, First year of practice, Transition period, Newly qualified, Recently qualified, New graduate, Novice
Search Terms 2
Experiences, Views, Perspectives, Attitude, Opinion, Perception
Search Terms 3
Occupational therapy, Occupational therapist, OT
Search Terms 4
Problem-Based Learning, Problem Based Learning, PBL, Enquiry Based Learning, Inquiry Based Learning, Case Based Learning
Search Terms 5
First year of practice, Move to practice, Clinical practice, Professional practice, Early stage of practice, Neophyte, Early practice, Practi*.

Table 4: Literature Search Results

Database	Search terms	Results	Reading title and abstract	Studies excluded	Studies related to gap
Medline (Ovid)	Terms 1,2,3	1261	35	23	12
	Terms 4,5	503	32	29	3
CINAHL (EBSCO)	Terms 1,2,3	912	19	15	4
	Terms 4,5	781	14	8	6
Google scholar	Terms 1,2,3	25	25	6	19
	Terms 4,5	5	5	0	5
OT-seeker	Terms 1,2,3	182	0	0	0
Scopus	Terms 1,2,3	1256	8	4	4
AMED (Ovid)	Terms 4,5	61	11	6	5
TOTAL		4986	149	91	58

3.1.2 Inclusion and Exclusion Criteria

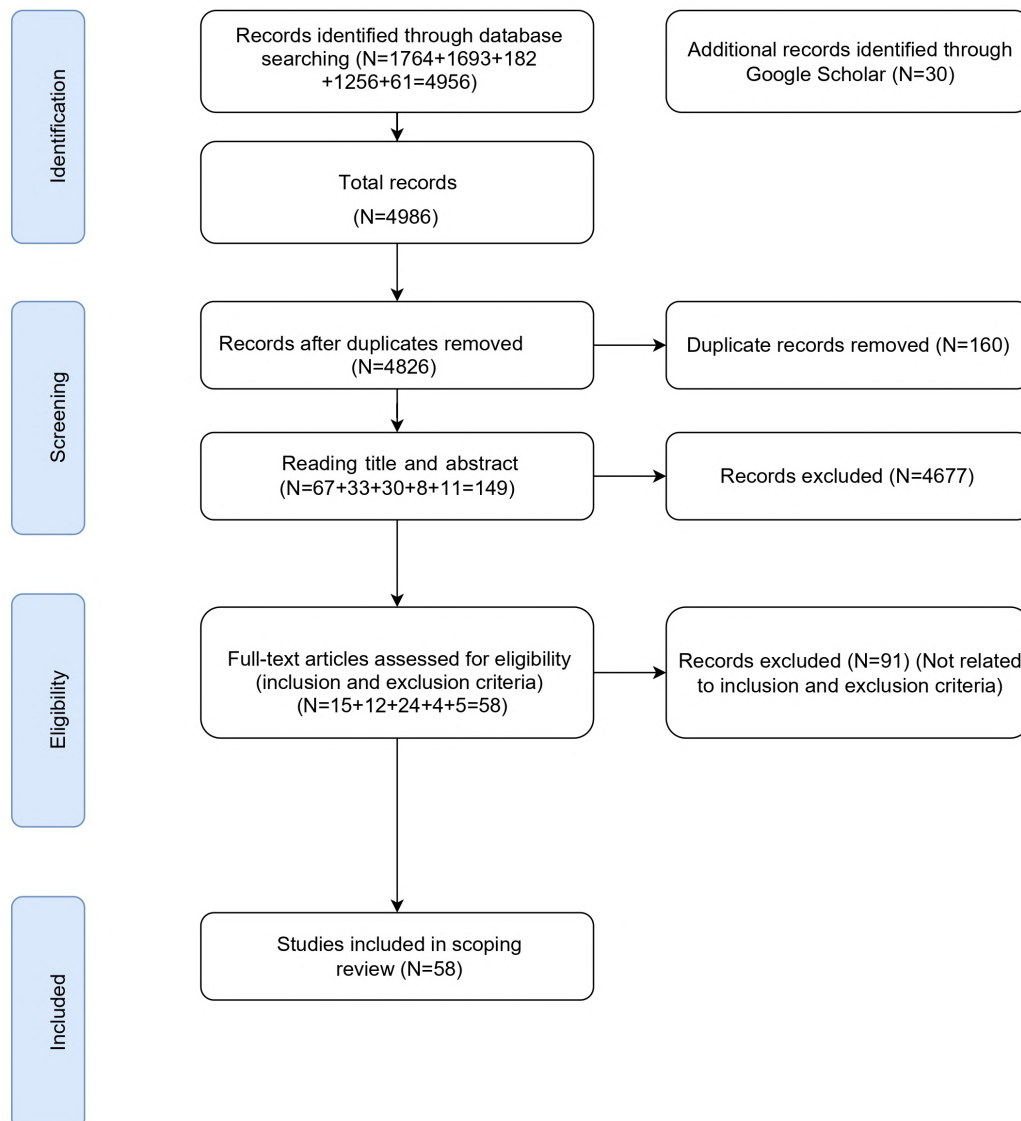
According to Munn et al (2018), a scoping review should have a broader scope than traditional reviews with more expansive inclusion criteria (Table 5). After determining the inclusion and exclusion criteria, fifty-eight studies were found which met the

inclusion criteria. The PRISMA chart (Figure 2) details the data selection process and the results.

Table 5: Inclusion and Exclusion Criteria

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> - Studies that addressed OTs' experiences of the transition period or when they first moved to practice. - Studies that addressed enablers or challenges that OTs faced when they moved to practice. - Studies that addressed specific programmes that helped OT students during practice transition or whether OTs were prepared for practice. -OTs/HCPs experiences of PBL during their practice. -A comparison between PBL and traditional or other teaching methods, where they show their results or impact on practice. -Evaluation of PBL courses and whether they influence students' practice. - Any study that discussed or mentioned how PBL influenced OTs'/HCPs' practice. - Any studies that might help in answering the scoping questions. - Full articles published in English between 1995 and 2022, to have a broad overview of the research literature. 	<ul style="list-style-type: none"> - Studies not related to OT if addressing transition experiences. - Studies that predominantly focused on student placements or the university programme. - Studies that only focussed on evaluation of PBL courses for universities. -Studies that focussed on evaluation of applying PBL in the workplace or specific programmes for HCP workers. - Conferences, commentaries, opinions, review of the literature, posters, and editorials. - Research, findings, and the discussion that were not related to practice, the transition period, or to scoping questions. -Duplicate studies. -Studies not in English.

Figure 2: PRISMA flow diagram outlining the search strategy.



3.1.3 Studies' characteristics

The 58 articles included in this review originated from eight countries. The majority of studies (N = 23) were conducted in Australia, twelve in the UK, four in Canada, four in the USA, three in South Africa, three in New Zealand, two in Ireland, two in the Netherlands, two articles included participants from both Ghana and Japan, the UK and Ireland, one in Israel, one in Spain, one in Sweden, and one in Hong Kong. The articles were published between 1996 and 2022, with thirty published in the past decade. The articles were from seven fields: OT (N = 43), medicine (N = 5), nursing (N = 4), PT (N = 3), speech and language therapy (N = 1), midwifery (N = 1), and dental hygiene (N = 1). Twenty-nine articles used qualitative methods, fifteen

quantitative methods, nine mixed methods, three case studies and two cohort studies. Data collection methods included questionnaires, interviews, focus groups, or combinations of these approaches.

In this scoping review, studies were critiqued using the Critical Appraisal Skills Programme (CASP 2018), e.g., the CASP qualitative studies checklist and the CASP cohort study checklist. Although the scoping reviews do not require such a level of critical appraisal, I felt it was necessary because I am undertaking a PhD and I wanted to show how I evaluated the research studies. I used Excel to create the checklist, which was useful and appropriate, as it has 10 to 12 questions that help researchers critique and make sense of the investigated research, including the aim, methodology, data collection method(s), and data analysis method(s). Studies addressing the review questions were extracted and tabulated in Appendix 4. This table summarises each paper's content, highlighting its aim, findings, method, gaps, developing themes and limitations. It also compares similarities and differences between papers, ensuring their relevance to the topic. Some examples and details on the studies' characteristics and critique can be found in Appendix 5.

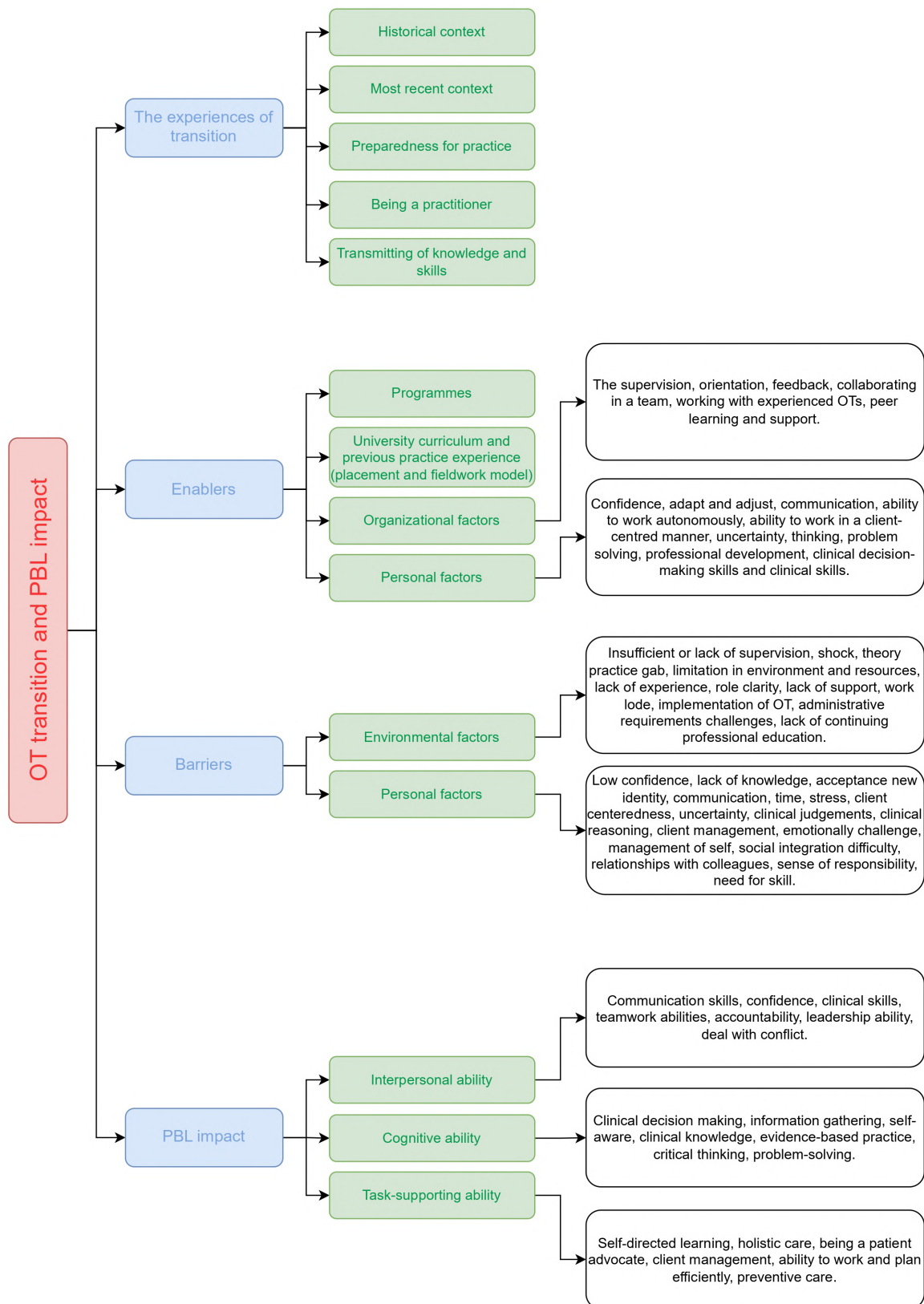
The studies' focus was somewhat diverse. While the majority addressed experiences of transition, including enablers and barriers (Moir et al. 2022; Opoku et al. 2022; Hardy et al. 2021; Murray et al. 2020; McCombie and Antanavage 2017; Towns and Ashby 2014; Nayar et al. 2013; Seah et al. 2011; Robertson and Griffiths 2009; Morley 2009, 2007; Morley et al. 2007; Toal-Sullivan 2006; Lee and Mackenzie 2003; Tryssenaar and Perkins 2001; Hummell and Koelmeyer 1999; Rugg 1999, 1996; Tryssenaar 1999), some addressed preparedness for practice (Naidoo et al. 2017, 2014; Nayar et al. 2013; Gray et al. 2012; Glenn and Gilbert-Hunt 2012; Adam et al. 2012; Doherty et al. 2009; Robertson and Griffiths 2009; Brockwell et al. 2009; Hodgetts et al. 2007; Lloyd et al. 2007; Toal-Sullivan 2006; Griffin and McConnelly 2001; Sutton and Griffin 2000; Adamson et al. 1998; Atkinson and Steward 1997), others discussed specific programmes that help transition (Turpin et al. 2021; Miyamoto et al. 2019; Larkin and Hitch 2019; Liddiard et al. 2017; Fitzgerald et al. 2015; Rodger et al. 2011; Morley 2009; Smith and Pilling 2008; Morley 2007), and the rest focused on how PBL impact the practice (Wormley et al. 2019; Bar et al 2018; Nallen et al. 2018; McMahan et al. 2016; Consul and Medina 2014; Whitcombe 2013b; Williams et al. 2012; Gunn et al. 2012; Applin et al. 2011; Spalding and Killett 2010;

Chikotas 2009; Cheng 2009; Leahy et al. 2006; Schmidt et al. 2006; Prince et al. 2005; Reeves et al. 2004; Antepohl et al. 2003; Dean et al. 2003; Hill et al. 1998). Some studies were carried out over twenty years ago, thus the situation might have changed or the workplace might not be the same.

3.2 Themes

From reviewing and analysing the literature, four main themes and 14 subthemes emerged (Figure 3).

Figure 3: Themes and subthemes of OT transition and PBL impact.



3.2.1 The Experiences of transition

This theme explored OTs' experiences of transition or starting practice. Early published research identified transition as a difficult process and reported that newly qualified OTs experienced difficulty in early practice (Robertson and Griffiths 2009; Morley 2009, 2007; Morley et al. 2007; Toal-Sullivan 2006; Lee and Mackenzie 2003; Tryssenaar and Perkins 2001; Sutton and Griffin 2000; Hummell and Koelmeyer 1999; Rugg 1999, 1996; Tryssenaar 1999). Similar findings were identified in recent research (Moir et al. 2022; Opoku et al. 2022; Hardy et al. 2021; Murray et al. 2020; McCombie and Antanavage 2017; Towns and Ashby 2014; Nayar et al. 2013; Seah et al. 2011). To achieve comprehensive coverage of the transitional experience for OT practitioners, this theme is divided into five subthemes: historical context, recent context, preparedness for practice, being a practitioner, and transmitting knowledge and skills.

3.2.1.2 Historical context

Rugg (1996) conducted a quantitative longitudinal study with 177 UK first year OT graduates to understand factors influencing practice decisions or early withdrawal. New OTs reported greater efficiency at treating clients and staff support, but faced challenges with collaboration, time, and mismatch between expectations and practice experiences; moreover, the provision of adequate supervision, role understanding, and skill utilization occurred less frequently than expected (Rugg 1996). Latterly, Rugg's mixed-method study on 206 UK OTs found that environmental and personal variables impacted work continuity, with increasing client numbers and support staff management causing more issues than expected. Only 55% of employees found that the work met their expectations, while 28% found their early work experience poor (Rugg 1999). Thus, new OT practitioners often withdrew due to practice difficulties (Rugg 1996), particularly reporting discrepancies between actual and expected practice (Rugg 1999).

A phenomenological study that followed one Canadian OT into her first mental health practice found that she experienced the whole transition as challenging due to poor communication and unexpected role confusion (Tryssenaar 1999). Similarly, a small Australian survey investigating the perceptions of 74 OTs from the University of

Sydney found that most (89%) recent graduates found the transition from student to graduate stressful (Hummell and Koelmeyer 1999). Similarly, recent OT graduates appreciated the challenging aspects of rural practice as opportunities for skills development (Lee and Mackenzie 2003), but as in Hummell and Koelmeyer's study, they experienced low self-confidence during the transition period. These studies highlight the need for better support, guidance, communication, and supervision to achieve successful transition from student to practitioner.

Tryssenaar and Perkins (2001) found that junior OTs experienced self-doubt and anxiety about their competence, and faced challenges such as time management, workload, paperwork, and job searching. Moreover, Toal-Sullivan (2006) revealed that participants struggled with general skills during their transition, and perceived a gap between classroom and practice skills, limited work experience, system issues, customer care responsibilities and role uncertainty. Likewise, a qualitative study of new OT graduates' perceptions of preparation for practice in New Zealand found that they faced fundamental problems, including lack of confidence, insufficient supervision, uncertainty about team responsibilities and role clarity, and insufficient skills and understanding (Robertson and Griffiths 2009). However, Tryssenaar and Perkins (2001) found that OTs underwent four consecutive phases to establish sustainable clinical competence: Transition (eager during the final placement), Euphoria and Angst (start of practice brings trepidation and excitement), Reality of Practice (not always a pleasant experience) and Adaptation (beginning of new world of professional practice). Thus, newly graduated OTs may struggle due to learning new clinical skills and working in different teams, but understanding the stages of the transition process can aid in curriculum development to support these graduates by formulating and rebuilding knowledge, bridging the gap between theory and practice to equip them with the necessary skills for the current healthcare environment.

Moreover, Morley et al. (2007) surveyed 45 recently qualified OTs in London regarding their experience of supervision and expectations of practice, finding that they had high initial expectations towards client care and professional supervision from their first jobs. However, an action research study in the UK revealed that transition can be stressful, and some respondents' expectations fell short in their first post, as they faced challenges during transition (Morley 2007). Morley's (2009) mixed-method study

examined contextual factors affecting the transition experience of recently qualified OTs, finding that strategies like role modelling, co-working, and informal support aided transition; whereas demands on recently qualified OTs increased with early expectations of independence in an interprofessional context. While participants in Morley's studies were under a preceptorship programme (explained later), in which they were supported by supervisors, they reported that sometimes that support was limited. Thus, while preceptorship emerged within this historical context to support OTs in transition, problems still persist for new OT practitioners.

Overall, transitioning from student to professional seems complex and time-consuming, and is often viewed as a major journey. Early research identified the transition as a difficult process and reported that newly qualified OTs experienced difficulties in early practice. Such studies led to support strategies for new OTs, and programmes have emerged to facilitate their transition, but challenges persist. Indeed, the experience of those early studies could be similar to the context of KSA, where OT is considered new, and the experiences of new graduate OTs need to be investigated. However, the next subtheme will examine more recent studies regarding OTs' transition experience, which might be different.

3.2.1.2 Most recent context

Two qualitative phenomenological studies were conducted in Australia to investigate the transition experiences of Master of OT students (Seah et al. 2011), and to examine OT students' perceptions of practice educators' impact on understanding occupation-focused models in practice (Towns and Ashby 2014). Seah et al. (2011) found a series of themes, including being new, needing skills, and pursuing satisfaction, and concluded that new OT master's students had an effective transition experience. In contrast, one of the themes that emerged in Towns and Ashby's (2014) study was explaining the relationship between theory and practice, where participants struggled to distinguish between theoretical knowledge forms in practice. Thus, researchers indicated that OTs graduating from postgraduate programmes might face fewer challenges (Nayar et al. 2013); however, different factors might impact their transition, with similarities and differences in perspectives across experiences (Seah et al. 2011).

In New Zealand, a mixed-methods study explored the perceived strengths and weaknesses of recently graduated OTs, finding that perceptions of readiness were mixed: they were seen as strong in continuing professional development and communication competencies, but weaker in environment and resource management and OT implementation (Nayar et al. 2013). Generally, as in Robertson and Griffiths' (2009) study, the graduates did not anticipate problems in defining their role and applying knowledge, in contrast to another study in which respondents faced difficulties distinguishing between theoretical knowledge forms in practice (Towns and Ashby 2014). Therefore, learning how to formulate and rebuild knowledge appears essential in preparing OT graduates (Robertson and Griffiths 2009). This could be achieved through PBL, as explained in section 3.2.4.

In the USA, a mixed-method study examined 202 OTs' transition during their first year of professional work. Most respondents' experiences were positive and job satisfaction was high due to having mentors and good clinical fit, with factors contributing to positive transition to clinical practice including good skills, clear roles and strong professional relationships (McCombie and Antanavage 2017). However, graduates reported lower ratings for self-confidence and higher likelihood of experiencing initial work stress and burnout. This was similar to previous research where self-rated confidence was low, with respondents experiencing work stress (Hummell and Koelmeyer 1999; Lee and Mackenzie 2003). PBL could build confidence, which is fundamental to successful practice (Section 3.2.4).

Recent Australian studies developed a grounded theory of how OTs learn once practicing (Murray et al. 2020), and a case study explored new OT graduates' experiences of making intervention decisions in paediatric practice (Moir et al. 2022). Early OTs were challenged, which promoted their learning and understood that knowledge shifted, which culminated in their realizing practice style and personal theory, and learned to be more reflective and deliberate in their actions and thinking (Murray et al. 2020). However, similar to those in Robertson and Griffiths' (2009) study, new OTs struggled with limited supervision and clinical decision-making and relied on experience and knowledge gained at university when making intervention decisions (Moir et al. 2022; Murray et al. 2020). This confirms the finding from the PBL impact

(Section 3.2.4), where HCP graduates relied on the experience and knowledge gained from PBL curricula, improving clinical decision-making in practice.

In South Africa, Hardy et al.'s (2021) explorative qualitative study explored twelve new OTs' experiences in neonatal intensive care units, and found that novice OTs were able to overcome the challenges faced (e.g., feelings of incompetence) by developing an occupational identity, competence (e.g., becoming autonomous learners, seeking mentorship) and adaptation. However, new OTs lacked advanced knowledge, experience, and skills; felt incompetent; and high patient loads and insufficient time impacted their experience, requiring further training and support (Hardy et al. 2021). This was similar to the findings from early OT graduates in New Zealand, who reported limited clinical competence and knowledge (Smith and Pilling 2008). PBL approaches can enhance such clinical competency and knowledge in practice (Sections 3.2.4).

Finally, an IPA study explored transition with six OTs in Ghana and found moments of uncertainty and self-doubt about their competence and preparedness to practice independently without supervision, which impacted their confidence (Opoku et al. 2022). This emphasized Robertson and Griffiths' (2009) findings, where supervision assisted new OT graduates to develop confidence and make good decisions in practice. Similar to Lee and Mackenzie (2003), lack of equipment negatively impacted OT services in hospitals, causing stress during transition. New graduates required professional development activities like reading and seminars (Opoku et al. 2022). This is consistent with other literature which highlights the importance of professional development during transition (Naidoo et al. 2014; Toal-Sullivan 2006).

This historical context seems to suggest that the transition experience of new OTs has improved over time, but challenges remain between early and recent research, including low confidence and limited supervision, competence, and knowledge. This indicates the need for more investigation, especially in new contexts, such as internships in KSA, which remain unexplored. Understanding this transition period will assist university staff in curriculum development (e.g., PBL), help therapists and employers to provide adequate supervision and support for graduates (e.g., internships), and increase awareness to help OTs prepare for this transition.

3.2.1.3 Preparedness for practice

New graduate OTs should be personally and academically ready to handle the daily regimen of clinical life. Several studies assessed the depth and degree of professional and personal readiness during work transition or entry. The earliest UK longitudinal study examined the first group of OT graduates' experiences over three years, including perceived preparedness to practice, finding that new practitioners were well-prepared for OT work and well-equipped in self-management, discovering the necessary information and professional development (Atkinson and Steward 1997). However, some participants expressed concerns about their readiness in specific aspects, like assessments, treatment, time management, and theoretical knowledge, possibly due to a lack of experience and insufficient emphasis on practical application.

In Australia, three early quantitative studies examined preparedness for practice, focusing on the adequacy of university education in preparing OTs for the workplace (Adamson et al. 1998), as well as OTs' expectations, preferences and values (Sutton and Griffin 2000) and the nature of OT practice in acute care settings (Griffin and McConnell 2001). Although Sutton and Griffin's (2000) findings showed that OT students had high expectations for work conditions with positive expectations for peer interactions, new graduates did not feel well prepared in communication skills, resource searching and stress management (Adamson et al. 1998) and needed improved preparedness in some skill areas and realistic expectations for practice in acute settings (Griffin and McConnell 2001). Thus, the researchers concluded that OT educators should prepare recent graduates, and need to understand how OT programs (e.g., PBL) can best enable graduates to meet the demands of the rapidly changing environment.

Later Australian studies were more positive regarding preparedness to practice, but some participants felt they lacked competence in certain areas. Brockwell et al.'s (2009) mixed-method study found that fieldwork subjects best prepared OTs for practice, emphasizing curriculum materials as helpful in preparing them for the workforce. Moreover, two quantitative studies found that most OTs felt sufficiently prepared to move to practice (Adam et al. 2012; Doherty et al. 2009), and stakeholders classified recent graduates as qualified in knowledge, professional behaviours, and

skills, but lacking proficiency in report writing, case management, and client data gathering (Adam et al. 2012).

The remaining Australian studies were qualitative. Lloyd et al. (2007) explored 15 newly graduated Australian OTs' challenges in a mental health setting, finding graduates well-prepared with the skills developed during university practical training, but lacking knowledge and skills for further practice development. Correspondingly, Glenn and Gilbert-Hunt's (2012) phenomenological study found that new graduates in Australia were unprepared to undertake shower assessments due to lack of experience and confidence, finding the process complicated and difficult. This finding agreed with Toal-Sullivan (2006), whose participants did not feel ready for complex areas of clinical practice (e.g., hand therapy), and less prepared for manual therapy settings, using resources (Gray et al. 2012), and technical and intervention strategies (Hodgetts et al. 2007). Therefore, it appears that there are differences between real practice and educational practice, with new OTs lacking confidence in practical skills, despite learning some skills at university, as some issues cannot be fully taught in educational settings (Robertson and Griffiths 2009). This creates conflict between practitioners' perception of their role, the reality of the practice, and their preparedness, which impacts their transition experience.

In Canada, Hodgetts et al. (2007) explored OTs' views regarding their preparedness for practice and satisfaction with their professional education, finding that both recent graduates and students reported that they lacked interventional and technical skills and experienced discrepancy between competency and expectations, as they did not feel clinically competent upon graduation. In contrast, an online survey in Australia and New Zealand explored 231 newly graduated OTs' preparedness for work and found that fewer than 8.5% in New Zealand and 17.1% in Australian asserted that they felt very well prepared after graduation, whereas the majority (66.4%) felt somewhat prepared for practice and only 10.3% reported that they were not prepared at all (Gray et al. 2012). These findings support other studies demonstrating that both students and stakeholders found that students possessed sufficient graduation competencies for entry-level practice (Naidoo et al. 2014), were prepared in most areas of knowledge, skills, and professional behaviours (Adam et al. 2012), and were prepared in continuing professional development and communication (Nayar et al. 2013).

In Africa, three qualitative studies explored final-year OT students' views regarding their preparedness to practice and the effectiveness of university curricula in achieving appropriate levels of readiness (Naidoo et al. 2014), the experiences of junior OT graduates in terms of the extent to which their curricula had prepared them for practice in primary healthcare settings (Naidoo et al 2017), and the transition from student to practitioner for the first OT cohort locally trained in Ghana (Opoku et al. 2022). While participants felt inadequately prepared for the demands of professional practice (Opoku et al. 2022), others reported adequate graduate competencies to prepare them for practice but were only partially prepared for clinical practice (Naidoo et al. 2014), or were well prepared with basic clinical skills as a necessity for urban practice (Naidoo et al. 2017). Naidoo et al.'s (2014) participants faced some difficulty when clients had more complex illnesses, and those in Naidoo et al.'s (2017) study were not adequately prepared for the reality and influence of hospital policies and practice in a rural setting. This could be linked to university curricula, because all participants in Opoku et al.'s (2022) study identified limitations in their undergraduate curriculum and called for changes to fully understand OTs' roles in the practice context and to improve preparedness for practice.

Generally, OT studies have provided contradictory results regarding graduates' preparedness to practice. Some indicate that recent graduates lack sufficient preparation, while others believe they are adequately prepared for practice, or are ready in some aspects but lacking in others. Overall, recent graduates felt inadequately prepared and professionally incompetent in some practice elements, including clinical skills (Opoku et al. 2022; Glenn and Gilbert-Hunt 2012; Robertson and Griffiths 2009; Hodgetts et al. 2007; Toal-Sullivan 2006; Griffin and McConnelly 2001; Adamson et al. 1998), whereas others felt at least somewhat prepared in some areas of practice (Naidoo et al. 2014, 2017; Nayar et al. 2013; Gray et al. 2012; Adam et al. 2012; Brockwell et al. 2009; Doherty et al. 2009; Lloyd et al. 2007; Sutton and Griffin 2000; Atkinson and Steward 1997).

Graduates' preparedness to practice has clearly improved over years. This may be attributed to curricula (e.g., applying PBL) or increased university practice experience. Older studies focused on new OTs with bachelors' degrees and no practice

experience, while current graduates might have undertaken masters' programmes or had practice experience due to increased educational requirements. However, the most recent study found that new OT practitioners were not effectively prepared and faced challenges in practice (Opoku et al. 2022). Thus, there is a need to explore OT graduates' readiness to practice (e.g., KSA/internship) to improve the readiness of future OT graduates.

3.2.1.4 Being a practitioner

Being a practitioner might mean navigating a stressful and challenging period, and it often involves re-defining oneself through a personal development process (Turpin et al. 2021; Gray et al. 2012; Seah et al. 2011; Morley 2009). According to Seah et al. (2011), a successful transition is essential for becoming a competent practitioner, requiring continuous development through learning and experience. Transitioning from the classroom to the work environment presents various challenges (Morley 2009). For example, OT studies highlighted concerns about tasks taking longer for the first few months (Turpin et al. 2021), administrative tasks, employee hierarchy, and feeling shocked by unexpected revelations (Liddiard et al. 2017). Moving to practice involved more stress and anxiety than student life (Turpin et al. 2021; McCombie and Antanavage 2017; Naidoo et al. 2014; Morley et al. 2007).

Early OT studies revealed significant gaps between the knowledge and skills acquired during undergraduate courses and those required in the workplace (Adamson et al. 1998). A more recent study found issues with uncertainty when starting work (Seah et al. 2011), whereas the most recent study found that new practitioners' initial inexperience negatively impacted service delivery, leading to a desire to learn new skills based on uncertainty about interventions' success (Opoku et al. 2022). Therefore, new practitioners may face shock upon starting work despite understanding the changing nature of the workplace, and Seah et al. (2011) described the uncertainty about the intensity and speed of new workload requirement as paddling in a fog where the vision of the future is unclear. However, even if new experiences are unclear or uncomfortable, reflecting and making sense of these experiences will lead to learning and recovery (Murray et al. 2020).

3.2.1.5 Transmitting knowledge and skills

Moving basic theoretical knowledge and skills to practice was seen as a frustrating process (Robertson and Griffiths 2009), as professional knowledge and skills differed from those learnt in academia (Morley 2007). Indeed, theory–practice compatibility is questionable, despite educational programmes preparing students for work (Toal-Sullivan 2006), and there is a need to rebuild knowledge and skills as practice evolves (Towns and Ashby 2014; Robertson and Griffiths 2009). Thus, universities have applied practice placement programmes, and others have adopted PBL to empower students and reduce the theory–practice gap and increase expertise through the development of knowledge and skills.

Early OT studies noted gaps between what OTs were taught at university and actual practice requirements, leading to lack of knowledge and skills or inability to determine their relevance in particular practice areas (Robertson and Griffiths 2009; Smith and Pilling 2008; Toal-Sullivan 2006; Tryssenaar and Perkins 2001). Similarly, relatively recent studies show that graduates may lack specific knowledge or skills about practice settings and conditions, limiting their confidence and preparedness for practice (Towns and Ashby 2014; Nayar et al. 2013; Seah et al. 2011). Adam et al. (2012) found that newly graduated OTs were qualified in most areas of knowledge and skills, possibly due to changes in education programmes, and felt confident about their ability to search for information to address gaps in their knowledge. A grounded theory study found that new OTs were initially challenged but valued and understood shifts in knowledge and skills (Murray et al. 2020). However, a recent study revealed that some theoretical knowledge and skills learned in university were not immediately obvious in practice (Opoku et al. 2022).

Overall, a successful transfer of knowledge and skills to practice is important for those who wish to become practitioners. However, rather than transferring existing knowledge and skills from one context to another, new graduates need to adapt or learn to respond to different situations, reconstruct knowledge and skills, or put them into context, as this is crucial to their transition. This could be gained through PBL, which enhances HCPs' confidence, critical thinking, information gathering, clinical knowledge and skills (Section 3.2.4).

3.2.2 Enablers

The transition period for recent graduates is not limited to students, graduates, or employers, but is a shared duty among all stakeholders, including universities, OTs, healthcare professionals, hospitals, national registration bodies, and professional societies. Thus, the literature recommended a number of processes to support the transition period, including support programs for recent graduates, linking academic and clinical settings through fieldwork opportunities, and integrating practice units into university courses (Liddiard et al. 2017). To present the factors supporting OT graduates in the transition period, the following review is organised into four subthemes: programmes; the curriculum, previous experience, practice placement and fieldwork models; environmental enablers; and personal factors.

3.2.2.1 Programmes

The literature offered many programmes developed to facilitate OTs' transition or overcome the expected challenges. Some programmes were based at university, such as peer-assisted study sessions (Larkin and Hitch 2019) and job clubs (Liddiard et al. 2017). Others were in the workplace, such as preceptorship (Morley 2006, 2007, 2009), an interdisciplinary allied health graduate programme (Smith and Pilling 2008), OTs' clinical learning framework (Fitzgerald et al. 2015) and a hospital graduate programme (Turpin et al. 2021).

Larkin and Hitch's (2019) phenomenological study explored 15 OT students' use of peer-assisted study sessions to enhance their practice education and training and found positive outcomes for students. Leaders supported the programme's use to enhance readiness for practice. The programme helped students feel safe in practice environments, share experiences among peers, develop and reinforce their existing skills, and increase connections with peers from different years. They enhanced student-centred and student-led activities, boosting confidence in student leaders and fostering learning through leading (Larkin and Hitch 2019). Moreover, a university in Australia developed a job club as a model to assist new OTs' transition, initially focusing on job searching (responding to criteria, interviewing, job search experiences); but alumni's needs led to a shift in focus to the transition from student to practitioner (Liddiard et al. 2017). Their case study showed that all graduates found

the job club beneficial to catch up with peers, receive job search support, and facilitate the transition to practice. Thus, university programmes to facilitate OTs' transition to practice seemed to improve the experiences of recent graduates.

Preceptorship is a one-year workplace program for newly qualified OTs joining the UK National Health Service, aimed at alleviating difficulties and reducing reality shock during their transition, depending on the role of the clinical supervisor (preceptor) (Morley 2007, 2006). The preceptorship program was praised for providing a structured induction, improving patient care standards, improve personal and professional confidence and clinical competence (Maringer and Jensen 2014; Morley 2007). It eased challenges by supporting newly qualified OTs in developing clinical skills, promoting reflective practice and professional behaviours and fostering satisfaction in OTs' first jobs. Morely's (2009) mixed-method study evaluated preceptorship to understand the contextual factors that impact the transition experience and found that co-working, informal support and role formation strategies facilitated transition. Preceptorship also provides opportunities to request feedback, collaborative practice skills and monitoring communications with other professionals, resulting in early expectations of independence in an interprofessional context. Thus, preceptorship reduces stress and role uncertainty for newly qualified OTs. This programme is the closest to internship, but students are not yet qualified (sections 2.3 and 2.4), and there is a gap in the literature regarding the impact of internship programmes for OTs' transition.

Smith and Pilling's (2008) case study described the implementation of an interdisciplinary allied health programme to support fourteen Australia graduates (including OTs) during their transition by offering an interdisciplinary team-oriented approach. This in-workplace programme, based on adult learning principles, comprised eight interactive two-hour sessions over twelve months to support recent graduates' transition by promoting critical thinking, interdisciplinary cooperation, and structured professional development. Researchers found the programme helpful during the first five to six months in reducing isolation, promoting sharing, providing peer support, learning with other disciplines, helpful reflective exercises, and enhancing confidence in the workplace (Smith and Pilling 2008). Similarly, Fitzgerald et al.'s (2015) action research cycles investigated an OT Clinical Education

Programme that aimed to explore ways to support recent graduates' clinical learning and professional development. OTs found that the programme complemented supervision practices, enhanced reflexive practice, defined learning procedures by motivating them to engage in learning, and supported the value of positive mentors for professional learning (Fitzgerald et al. 2015). Thus, the programme had the potential to direct new graduates' goal development with supervisory support.

A more recent workplace programme was a 12-month programme applied in one Australian metropolitan hospital for newly graduated OTs, comprising support and supervision, including reflection on practice to develop skills, clinical reasoning and identify learning goals (Turpin et al. 2021). Graduates reported positive effects from providing supervision and peer support to each other, and the programme's guided questioning aided the development of professional skills and clinical reasoning, whereas reflection helped them to identify and address learning goals relating to their professional competencies (Turpin et al. 2021).

Overall, OT studies suggest that various programmes have been developed to facilitate new OTs' transition and overcome challenges, with positive results. However, the internship programme for new OTs, as in KSA, has not been studied. This programme differs from those discussed above because it is a one-year paid period under official supervision and OT interns are not yet qualified as therapists (Chapter 2). Therefore, the influence of the internship programme for new OTs must be studied.

3.2.2.2 Curriculum and previous practice experience (placement and fieldwork model).

The curriculum influences OT undergraduate programmes and graduate work, as it equips OTs with knowledge, information and professional skills. Early study has shown that graduates appreciate the EBP curriculum, which enhances their research skills, addresses diverse areas of OT knowledge, and takes a holistic approach to practice (Doherty et al. 2009). Indeed, the South African OT curriculum equipped new graduates with research skills, problem-solving for practice settings, basic clinical skills, and theoretical knowledge for implementing therapeutic and rehabilitation interventions in hospitals (Naidoo et al. 2017), integrating theoretical knowledge into

practical applications and clarifying professional reasoning during the intervention session (Naidoo et al. 2014). However, a recent study highlighted the need for curriculum development to support new OT graduates' transition into practice (Opoku et al. 2022). Accordingly, utilising PBL will facilitate OTs' practice, as studies reviewed in section 3.2.4 (PBL impact) found that it enhanced OTs' practice abilities (Bar et al. 2018; Whitcombe 2013b; Spalding and Killelt 2010; Reeves et al. 2004).

Another factor that helped with OTs' transition was their previous experience. The literature highlighted the significance of work experience and practical education in academic programmes, which helped students in current practice and enabled them to integrate academic knowledge with workplace situations (Gray et al. 2012; Seah et al. 2011). An early OT study categorised fieldwork models as valuable for graduates' work and as an important source of workplace knowledge and skills (Hodgetts et al. 2007). Another study concurred that fieldwork was generally beneficial in preparing OT graduates for practice (Doherty et al. 2009), and new graduates reported that it helped in developing skills related to client health support, improving graduates' confidence and ability to learn (Naidoo et al. 2014). Thus, fieldwork models in OT education prepare graduates better for practice and significantly influence field choices for clinical practice (Brockwell et al. 2009).

OT students expected to gain a comprehensive knowledge base and clinical experience from their practice placements, which offered early OTs positive work experience in mental health settings compared to those without such placement experience (Lloyd et al. 2007), and with opportunities to gain clinical skills, experience with practice tools, and develop their confidence and team interaction (Toal-Sullivan 2006). Rodgers et al.'s (2011) qualitative study examined Australian students' and teachers' perspectives on quality practice placement experiences and found that they fostered a welcoming learning environment, mentoring and clear expectations, quality practice, open, honest relationships, and feedback from supervisors. Another qualitative study compared UK and Japanese OT students' experiences of facilitating and restricting growth in training placements, finding that placements facilitated growth, self-reflection, understanding of supervisors' role, sense of responsibility, clinical knowledge and skills, and time management (Miyamoto et al. 2019).

Overall, curriculum and previous practice experience (e.g., placements, fieldwork) seem to facilitate the transition to practice and make it less stressful. However, curriculum/placement/fieldwork experience must be high in quality, requiring attention from undergraduate students, practice teaching staff, and educators to ensure its relevance and effectiveness.

3.2.2.3 Environmental enablers

The OT literature mentioned numerous environmental enablers, including supervision, feedback, orientation, team collaboration, working with experienced OTs, and peer learning and support.

Supervision

Supervision is considered the most important element of OTs' transition. Early studies recognised that supervision was crucial for handling difficulties, reduced practice reality shock effects, helped with finding new jobs, and thus facilitated transition and developed OTs' competencies (Tryssenaar and Perkins 2001; Sutton and Griffin 2000; Hummell and Koelmeyer 1999; Rugg 1999; Tryssenaar 1999). Other literature suggests that new OTs benefited from supervision, which promotes confidence, reflection, creativity, professional identity, work satisfaction and opportunities for clinical discussion (Doherty et al. 2009; Robertson and Griffiths 2009; Hodgetts et al. 2007; Morley et al. 2007; Toal-Sullivan 2006). Similarly, recent studies emphasised the importance of supervision for junior OTs, particularly at the beginning of practice, to develop vital skills (e.g., clinical reasoning), identify learning goals, and build confidence, thus facilitating transition to practice (Liddyard et al. 2017; McCombie and Antanavage 2017; Fitzgerald et al. 2015; Gray et al 2012; Rodger et al. 2011; Seah et al. 2011). Moreover, supervision should match new OTs' learning (Murray et al. 2020), as it benefits junior OTs' development (Turpin et al. 2021) and enables them to gather strategies and ideas by listening to supervisors' discussions (Moir et al. 2022). Consequently, most of the literature on OTs' practice entry recommends that experienced OTs support new practitioners through supervision.

The value of feedback

Feedback is one factor that helps new OTs in practice. Early studies found that formal supervision feedback was crucial for successful transition, as it reinforced confidence, reduced initial anxiety, facilitated job adaptation, and helped to encourage reflection on practice and work satisfaction (Morley 2006; Lee and Mackenzie 2003; Hummell and Koelmeyer 1999). Similarly, recent studies indicated that new OTs valued feedback, as it contributed to learning, experience, knowledge, and informed intervention decisions (Moir et al. 2022; Opoku et al. 2022). In fact, OT students considered timely feedback about their practices to be the most important part of practice and felt empowered to deal with negative feedback if it was presented constructively (Naidoo et al. 2014; Rodger et al. 2011). Thus, new OTs considered the balance of positive and negative feedback to be vital in practice.

The value of orientation in new workplaces

The OT literature reported that orientation helped with practice transition. An early study found that 82% of recent graduates valued their orientation programmes, which provided workplace information, facility tours, and introductions to policy and procedure manuals for smooth transition (Hummell and Koelmeyer 1999). The orientation process and understanding of placement expectations was a crucial issue raised by all stakeholders, particularly in early placements (Rodger et al. 2011). Similarly, Moir et al. (2022), Hardy et al. (2021), and Turpin et al. (2021) discovered that formal orientation provided substantial support to recent OT graduates, especially in new environments, improving their confidence and guiding work practices related to the health district, caseload, and hospital. In contrast, Opoku et al. (2022) found that the workplace was a source of pressure for new OTs because of the absence of orientation programmes. Overall, this suggests that orientation programs should be comprehensive and flexible to clarify expectations, reduce anxiety, and provide an idea of tasks and expected progress.

Collaborating in a team and with experienced OTs

Collaborating in a team was an enabling factor for new OT graduates and facilitated transition by enabling them to establish good interdisciplinary relationships and communicate openly with team members (Hardy et al. 2021; McCombie and Antanavage 2017; Doherty et al. 2009; Morley 2009). Moreover, formal and informal

support from experienced OTs aided new graduates' practice (Moir et al. 2022; Hardy et al. 2021; Turpin et al. 2021; McCombie and Antanavage 2017; Morley 2009; Toal-Sullivan 2006), as did support from experienced OTs outside the workplace, such as previous practice teachers or OTs in other countries (Opoku et al. 2022; Rodger et al. 2011).

Peer learning and support

The OT literature identified the benefits of support within or outside the workplace in facilitating the transition to practice. Peer learning and support were among the many influences (Naidoo et al. 2014; Seah et al. 2011; Morley et al. 2007; Toal-Sullivan 2006), allowing graduates to share ideas (Morley 2009). Similar effects were found in recent studies where new graduates reported positive effects from peer support (Opoku et al. 2022; Turpin et al. 2021), and described how chatting with peers enabled them to seek intervention ideas (Mori et al. 2022).

3.2.2.4 Personal factors

The literature mentioned many personal factors that supported transition, including confidence, adaptability, communication skills, the ability to work autonomously and in a client-centred manner, and professional development, clinical decision-making, critical thinking and problem-solving skills.

Confidence

OT studies recognised the importance of confidence in service delivery and its connection to successful transition, as it promotes goal-setting, continuing education, and self-efficacy in clinical decision-making, particularly among recent graduates (McCombie and Antanavage 2017; Seah et al. 2011; Doherty et al. 2009; Robertson and Griffiths 2009). Interestingly, transition experience increased graduates' confidence, leading to satisfactory clinical performance scores and positive experiences, even in difficult situations (Naidoo et al. 2014; Seah et al. 2011). This was similar to early OT literature, showing that recent graduates' initial doubts about professional competence were replaced by self-confidence, and they become more confident in their roles as they gained clinical experience (Lee and Mackenzie 2003; Tryssenaar and Perkins 2001). New OTs' confidence was improved by opportunities

to consolidate their learning through repeated practice (Murray et al. 2020), including learning from their own mistakes (Opoku et al. 2022).

Adaptability

Early research highlighted the importance of adaptation for successful transition. New OT graduates initially struggled to develop adaptive strategies, but this improved from the fourth to sixth month of practice (Tryssenaar and Perkins 2001), or through experience, dealing with their organisations' policies and procedures (Toal-Sullivan 2006). Indeed, the concept of adaptation was linked to professional socialization, as new OTs acquired norms, values, skills, and roles during transition that enable effective group functioning (Morley 2009). Therefore, new OTs normalised their cognitive and emotional adjustments during their transition, relying on coping strategies, and became comfortable by adapting and learning about the organisation and personalising the work environment, which aided their transition (Seah et al. 2011). Moreover, recent OT studies confirmed the importance of adaptability, especially regarding theory-practice gaps (Opoku et al. 2022; Murray et al. 2020) or adapting to ICU demands to achieve more efficient planning and independence in practice (Hardy et al. 2021). Thus, new OTs should seek to develop context-specific adapting mechanisms.

Ability to communicate

Ability to communicate is a complementary factor that is expected to be relevant to successful transition and practice. Although earlier OT research stated that recent graduates did not feel that they had sufficient communication skills (Adamson et al. 1998), ability to communicate with colleagues or HCPs was reported as important for competence and meaningful transition (Toal-Sullivan 2006; Lee and Mackenzie 2003). More recent studies found that new OT graduates had good communication skills, which facilitated their practices (McCombie and Antanavage 2017; Nayar et al. 2013; Adam et al. 2012; Seah et al. 2011), while practice provided opportunities to develop such skills (Turpin et al. 2021). This was essential in ICU (Hardy et al. 2021), and enabled OTs to express their concerns (Opoku et al. 2022). Overall, communication skills facilitate the transition to practice, and may be influenced by PBL (section 3.2.4).

Autonomous and client-centred working

New OT graduates' transition to practice was also assisted by the ability to work autonomously (Murray et al. 2020; Naidoo et al. 2014; Morley 2009; Doherty et al. 2009) and in a client-centred manner (Doherty et al. 2009; Tryssenaar and Perkins 2001). There was early expectations for autonomy in OT settings (Morley 2009; Morley et al. 2007; Smith and Pilling 2007), and recent OT graduates experienced support in becoming independent learners through questioning, reflection, and work experience (Turpin et al. 2021). Interestingly, new OTs in Ghana worked autonomously from their first year in a country without established OT (Opoku et al. 2022), indicating that their university curriculum equipped them with the skills needed for independent client-centred work.

Professional development, clinical decision-making, critical thinking, and problem-solving skills

Research shows that offering professional development and continuing education to new OT graduates during their transition helps them to build essential information and technical skills, aiding their transition into practice (Moir et al. 2022; Opoku et al. 2022; McCombie and Antanavage 2017; Naidoo et al. 2014; Nayar et al. 2013; Hodgetts et al. 2007; Toal-Sullivan 2006). Additionally, PBL promotes clinical decision-making (Opoku et al. 2022; McCombie and Antanavage 2017; Toal-Sullivan 2006), critical thinking (Turpin et al. 2021; Murray et al. 2020; Naidoo et al. 2014; Rodger et al. 2011), and problem-solving skills (Murray et al. 2020; McCombie and Antanavage 2017; Doherty et al. 2009; Toal-Sullivan 2006); see sections 3.2.4.

3.2.3 Barriers

Early and recent OT studies report that new OTs faced challenges with initial experience, leading to low confidence, poor professional development, and role uncertainty. Indeed, new OT graduates often face a significant gap in expectations and experiences during practice transition, resulting in feelings of incompetence, stress, and withdrawal (Liddyard et al. 2017; Fitzgerald et al. 2015), highlighting the importance of studying this gap. The following review is organised into two subthemes: environmental barriers and personal barriers.

3.2.3.1 Environmental barriers

The OT literature identified numerous environmental barriers, including insufficient supervision, shock and stress, theory-practice gap, lack of prior practical experience, resource limitations, lack of orientation, insufficient role clarity, administrative challenges, lack of support, and high patient loads.

Insufficient or lack of supervision

Most early OT research highlights issues of inadequate supervision, with new graduates struggling with the transition to practice due to insufficient professional supervision or working alone without direct contact with supervisors (Morley 2009; Robertson and Griffiths 2009; Smith and Pilling 2008; Lloyd et al. 2007; Morley 2007; Morley et al. 2007; Griffin and McConnelly 2001; Hummell and Koelmeyer 1999; Rugg 1996). This might result in a weak sense of professional identity, role uncertainty or limited professional development. Thus, early studies called for more supervision for new OT graduates (Robertson and Griffiths 2009; Smith and Pilling 2008; Sutton and Griffin 2000). Similarly, recent studies found concerns about insufficient clinical supervision, hindering transition and negatively impacting new OTs (Miyamoto et al. 2019; McCombie and Antanavage 2017; Naidoo et al. 2014). Likewise, recent studies highlighted the lack of supervision as a critical factor that made transition more challenging (Hardy et al. 2021; Murray et al. 2020), especially if OTs started their careers without supervision because there were no established OT departments or practitioners (Opoku et al. 2022). Hence, supervision is crucial during early transition and professional development to bridge theory-practice gaps, build confidence, and develop professional identity and skills.

Shock and stress

Early studies found that the shock of real-world practice led to conflicting values, stress, and role uncertainty, affecting new graduates' skills, knowledge, behaviour, and personal and professional lives, particularly during their first months (Tryssenaar and Perkins 2001; Sutton and Griffin 2000, Tryssenaar 1999; Rugg 1999; Rugg 1996). This shock also faced new graduates in recent studies (Turpin et al. 2021; Murray et al. 2020; McCombie and Antanavage 2017). Moreover, newly qualified OTs experienced stress due to colleagues' misunderstandings, workload, busy health services and high client responsibilities (Morley 2009; Smith and Pilling 2008; Lloyd et

al. 2007; Toal-Sullivan 2006; Tryssenaar and Perkins 2001; Rugg 1999; Adamson et al. 1998). Similarly, recent studies indicated that new practitioners experienced stress from peer evaluation, burnout, work tasks or intervention decision-making (Moir et al. 2022; Opoku et al. 2022; Turpin et al. 2021; Murray et al. 2020; Miyamoto et al 2019; McCombie and Antanavage 2017).

Theory-practice gap and lack of prior practical experience

Feeling shocked or stressed may be attributed to the gap between theory and practice (Opoku et al. 2022; Hodgetts et al. 2007), as newly qualified OTs found it challenging to apply theory to clinical practice (Naidoo et al. 2014; Morley 2007; Hodgetts et al. 2007; Tryssenaar and Perkins 2001; Adamson et al. 1998; Atkinson and Steward 1997). This may be related to lack of prior practical experience or limited exposure to the reality of OT practice (Hardy et al. 2021; Glenn and Gilbert-Hunt 2012; Morley 2009; Toal-Sullivan 2006; Lee and Mackenzie 2003; Hummell and Koelmeyer 1999; Atkinson and Steward 1997).

Other environmental barriers

Other challenges faced by newly qualified OTs during the transition to practice included resource limitations (Opoku et al. 2022; Moir et al. 2022; Hardy et al. 2021; Nayar et al. 2013; Lee and Mackenzie 2003), lack of orientation (Opoku et al. 2022; Hardy et al. 2021), insufficient role clarity (Opoku et al. 2022; Hardy et al. 2021; McCombie and Antanavage 2017; Naidoo et al. 2014; Robertson and Griffiths 2009; Lloyd et al. 2007; Toal-Sullivan 2006), administrative challenges (Seah et al. 2011; Lloyd et al. 2007; Tryssenaar and Perkins 2001; Adamson et al. 1998), lack of support within and outside the workplace (Opoku et al. 2022; Murray et al. 2020; Robertson and Griffiths 2009; Lloyd et al. 2007; Toal-Sullivan 2006; Hummell and Koelmeyer 1999), and heavy workloads, especially in the first months (Hardy et al. 2021; Turpin et al. 2021; Murray et al. 2020; Naidoo et al. 2014; Nayar et al. 2013; Gray et al. 2012; Morley 2009; Smith and Pilling 2008; Lloyd et al. 2007; Toal-Sullivan 2006; Tryssenaar and Perkins 2001). Moreover, poor role understanding and limited support opportunities can cause low confidence, confusion and overlapping responsibilities, particularly with physiotherapists, leading to more stressful transition. Management of a heavy caseload workload will restrict time for supervision, guidance, co-working and support for recent OT graduates.

3.2.3.2 Personal barriers

Many personal factors were identified as barriers in the OT literature, including low or fluctuating confidence, lack of knowledge or skills, communication issues, acceptance of new professional identity, inadequate time management skills, difficulties with self-management, client management, and a holistic approach, lack of clinical decision-making or reasoning skills, emotional challenges and inability to take adequate responsibility. However, the PBL approach could provide new graduates with many of the skills needed to reduce these personal challenges in practice, as found in section 3.2.4 (PBL impact).

Low confidence and lack of knowledge or skills

New OTs experienced low confidence when they moved to practice, which made the transition difficult, especially at first (Opoku et al. 2022; Miyamoto et al. 2019; Robertson and Griffiths 2009; Smith and Pilling 2008; Hodgetts et al. 2007). This was linked to low professional or personal confidence in clinical competence, specific areas of practice (mental health), conducting new assessments or decision-making during supervision (Moir et al. 2022; McCombie and Antanavage 2017; Glenn and Gilbert-Hunt 2012; Lloyd et al. 2007; Lee and Mackenzie 2003). Inadequate knowledge or skills during the transition may affect new practitioners' confidence, as they realise they do not have the skills and knowledge to become fully qualified practitioners (Morley 2009; Robertson and Griffiths 2009; Hodgetts et al. 2007; Lloyd et al. 2007). Such perceived gaps represent another personal barrier identified in many OT studies (Opoku et al. 2022; Moir et al. 2022; Hardy et al. 2021; Murray et al. 2020; Miyamoto et al. 2019; Naidoo et al. 2017; Nayar et al. 2013; Seah et al. 2011; Smith and Pilling 2008).

Communication and acceptance of new professional identity

Researchers found that communication was challenging for new OTs, impacting their transition through communication difficulties with colleagues, lack of confidence or inability to communicate effectively (Seah et al. 2011; Robertson and Griffiths 2009). Communication difficulties were mainly identified when the language of service users differed from theirs (Naidoo et al. 2017). This is relevant to the internship program in KSA, where Arabic is the primary language but new OTs communicate with each other and with other professionals in English. Moreover, early studies found that new OT

practitioners faced difficulty in accepting or maintaining a professional identity within interdisciplinary practice (Seah et al. 2011; Morley 2007; Lloyd et al. 2007; Smith and Pilling 2007; Toal-Sullivan 2006). Successful transition to practice requires not only a strong professional identity, but also skills and understanding of interdisciplinary collaboration.

Other personal barriers

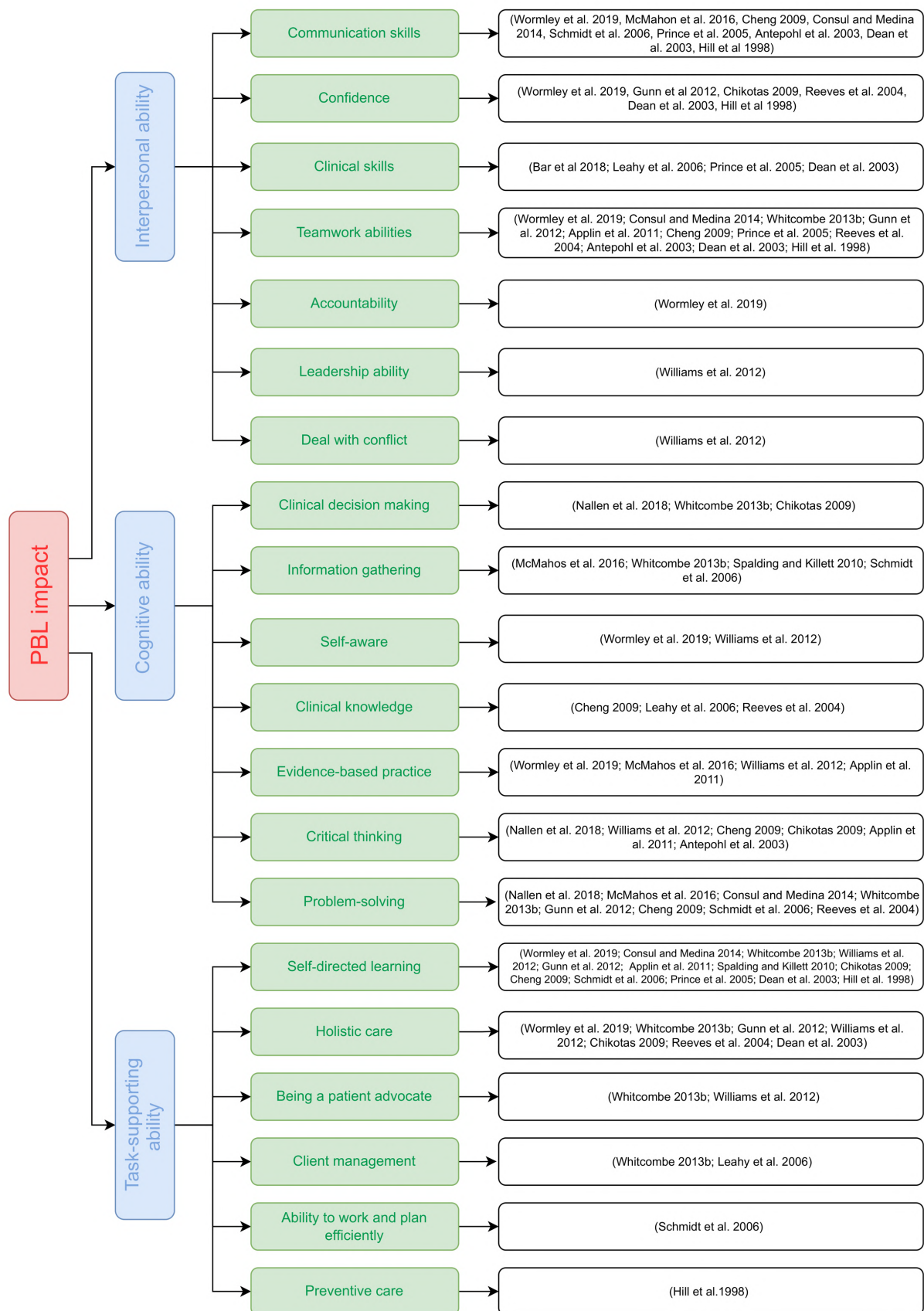
OTs faced challenges with time management, and needed to adapt to full-time work (Hardy et al. 2021; Miyamoto et al. 2019; McCombie and Antanavage 2017; Nayar et al. 2013; Smith and Pilling 2008; Lloyd et al. 2007; Hodgetts et al. 2007; Toal-Sullivan 2006), as well as difficulties with self-management (Nayar et al. 2013), client management (Lloyd et al. 2007), and implementing a client-centred or holistic approach (Murray et al. 2020; Morley et al. 2007; Toal-Sullivan 2006). The latter might be linked to other barriers, such as lack of time, limited funding, and differences in practice philosophy between therapists and work settings. Moreover, new practitioners faced challenges with clinical decision-making and reasoning (Moir et al. 2022; Murray et al. 2020; Glenn and Gilbert-Hunt 2012; Hodgetts et al. 2007; Toal-Sullivan 2006), emotional challenges (Murray et al. 2020; Seah et al. 2011), and inability to take adequate responsibility (Miyamoto et al. 2019).

3.2.4 PBL impact

3.2.4.1 Interpersonal ability

This section has seven subthemes including communication skills, confidence, clinical skills, teamwork abilities, accountability, leadership ability and deal with conflict (Figure 4).

Figure 4: Themes and subthemes of PBL impact.



3.2.4.1.1 Communication skills

This finding was discussed in nine studies (see Figure 4), which reported that communication skills are developed more in the PBL learning environment and this supports transition to clinical practice.

In two PT qualitative studies, 27 students who reflected on their collaborative learning during the PBL curriculum (Wormley et al. 2019) and 68 students' views of primary healthcare practice (McMahon et al. 2016) found the development of communication skills essential to the development of the health practitioner as a professional. PBL enhanced practitioners' active listening and nonverbal communication skills, enabling them to feel comfortable in multidisciplinary teams and collaborate effectively with patients and colleagues (Wormley et al. 2019). Although PT identified communication issues with patients verbally and in writing within interdisciplinary teams (McMahon et al. 2016), these issues were linked not to the PBL course but to students' confidence. Thus, they realized that building confidence in oral and written communication is crucial because of lack of education and practice experience in communication with patients or team members in placement and college (McMahon et al. 2016). Therefore, communication skills are considered key to providing quality care to others and a part of HCPs' core competencies.

Cheng (2009) explored whether 18 dental hygienists continued to use their PBL skills in the workplace. They found that effective communication with patients is crucial to ensure successful patient interactions (e.g., advice, education, and oral hygiene instructions), as responding appropriately to patients' feelings will enhance patient satisfaction. These results indicated that communication skills are among the skills transferred from the university's teaching mode to the practice context through PBL, as every constructive suggestion from students during group discussion is welcomed in PBL, and students are encouraged to become effective communicators. Thus, communicating with patients is an important skill in modern social life that is enhanced through PBL, and effective communication with patients and colleagues improves the quality of service provided and enhances the value of practice, especially teamwork and professional development.

Consul and Medina (2014) undertook a case study with 29 ex-nursing students and found that personal relationships in the hospital context involve accompanying and communicating with patients during times of weakness. However, PBL sessions helped students to address communication difficulties in small groups, identifying and improving them before transitioning to clinical practice with health teams, patients, and family members (Consul and Medina 2014). Likewise, Dean et al. (2003) compared the preparedness for hospital practice among graduates from different medical programmes at Sydney University and found that organisers rated the PBL graduates more highly in communication, and that the PBL teaching environment contributed to interns' performance in practice.

From a medical perspective, 820 questionnaires completed by PBL graduates in the Netherlands reported improved skills, benefiting interactions with patients (Schmidt et al. 2006). Similarly, a study of 1159 Netherlands graduates (from one PBL and four non-PBL schools) found that communication skills were the most frequently used competencies and were covered sufficiently in PBL (82.8% vs 41.1% non-PBL). PBL graduates acquired communication skills in medical school, while non-PBL graduates acquired them in practice or elsewhere (Prince et al. 2005). In parallel, Antepohl et al. (2003) identified that 336 PBL graduates in Sweden reported satisfaction with communication skills, emphasizing their importance in the university curriculum, whereas among 139 Australia interns, PBL graduates scored higher than their peers in interpersonal skills, particularly effective communication with hospital patients in difficult situations, which is crucial in medicine (Hill et al. 1998). Thus, PBL seems to improve communication skills for medical practice.

To summarise, Wormley et al. (2019) found that PBL helped practitioners to be active listeners and adapt their teaching methods to effectively use nonverbal communication with patients and colleagues, and helped students to feel comfortable entering the clinic as members of a multidisciplinary team. Consul and Medina (2014) found similar results to Cheng (2009) on the importance of communication. Both studies suggested that the relationships established during PBL and peer assessment sessions helped

to establish communication with other group members and that students continued to use these skills in the workplace. Also, dental hygienists' assessment of patient communication skills and patient education showed marked improvements, leading to successful patient education and increased patient satisfaction and loyalty (Cheng 2009). Finally, medical studies found communication to be one of the most used competencies in practice (Schmidt et al. 2006; Prince et al. 2005).

3.2.4.1.2 Confidence

Confidence was mentioned in six studies (Figure 4). Gunn et al.'s (2012) qualitative study found that PBL-educated PT students demonstrated effective learning strategies in placement practice, with participants highlighting positive traits, including confidence. Similarly, Wormley et al. (2019) found that the PBL curriculum provided opportunities for students to build confidence, such as practical laboratory examinations and individual and group presentations, enhanced their overall confidence, and helped them to answer difficult patient questions and respond in multidisciplinary team meetings. Basically, students faced certain challenges in PBL programmes that developed their required confidence; then, as practitioners, they were more confident to present to larger audiences, and expressed confidence in clinical settings and decision-making.

Reeves et al. (2004) sought to identify OT graduates' views on how PBL affected their professional practices after their qualification. They found that 75% of graduating OT participants reported that PBL positively increased their confidence as newly qualified OTs. OT graduates found that PBL boosted confidence in working with experienced colleagues, working in an evidence-based and self-directed manner, and participating in service development (Reeves et al. 2004). Moreover, medical studies generally found that PBL improved confidence in practice. Both Hill et al. (1998) and Dean et al. (2003) reported that PBL medical graduates rated their practice preparation higher than traditional graduates in skills like confidence, and were rated highly by organizers for their practice confidence. In contrast, Chikotas' (2009) study suggested that nurses lacked confidence in clinical practice because they had not learned enough. However,

nurses felt confident in practice even if they did not understand something, as PBL had provided them with the skills to find answers independently (Chikotas 2009).

Overall, previous research suggests that HCPs have realized that PBL builds their confidence, which is fundamental to be a successful practitioner. Confidence-building through PBL is crucial to enable HCPs to describe diagnoses and care plans, and allows them to share knowledge confidently with patients and colleagues, fosters mutual relationships within the healthcare team, and facilitates the transition from student to experienced practitioner.

3.2.4.1.3 Clinical skills

Clinical skills were reported generally in four studies (Figure 4). A retrospective cohort study recruited 166 OT participants from three consecutive academic years, reporting that students who demonstrated good clinical reasoning skills in the PBL course were more likely to impart these skills in fieldwork contexts when facing actual clients (Bar et al. 2018). Moreover, two studies found that the majority of medical PBL graduates had developed profession skills in medical school, whereas only a minority had learned them in the workplace (Prince et al. 2005), and organisers rated Sydney graduates highly in clinical competence and professional skills (Dean et al. 2003). This indicates that the PBL method enhanced students' clinical experience skills when they moved to practice.

In contrast, Leahy et al. (2006) undertook a survey of 35 speech and language students to study their perceptions of PBL as an educational strategy in preparation for clinical work and found that some students did not appreciate the association between clinical work skills and the PBL process, and few considered clinical observation and lessons helpful. Likewise, Rodger et al. (2011) found that clinical fieldwork requires engagement with the client, their circumstances, reactions, and family expectations; and all these things only happen in a real environment, not in PBL. However, students can develop appropriate skills in PBL, but in a real work context, additional factors influence their performance, requiring skills beyond those acquired in PBL courses. Thus, some students recognised the positive effects of PBL as learning intervention strategies that developed more flexible clinical skills and

reported that PBL provided techniques that could be used to reflect on their performance in the clinic (Leahy et al. 2006).

Generally, some studies suggest an inverse relationship between PBL and real clinical work, requiring additional skills to be developed in practice. However, PBL problems need to be based on real-world practice cases, requiring students to apply clinical reasoning and learning skills in practice contexts. Thus, clinical skills are greatly enhanced in PBL when studying and learning through real-life problems (Scaffa and Wooster 2004).

3.2.4.1.4 Teamwork abilities

This subtheme was reported in eleven studies as a component of PBL that ranked highly on the list of learned skills (Figure 4). OTs' views indicated that PBL significantly influenced their professional activity. Reeves' (2004) quantitative study found that 58% of OT graduates believed that PBL enhances teamwork understanding through increased knowledge and skills. Likewise, Whitcombe (2013b) undertook a qualitative study to address the impact of PBL on OT students' professional identity and knowledge, and found that practice was not acquired individually through student placement experiences, but rather that OT skills were formulated through the interaction of placement with pedagogy in PBL. One participant reported that PBL gave him the skills needed to work with people (Whitcombe 2013b), whereas other participants felt that PBL enhanced the skills needed to work effectively with colleagues (Reeves et al. 2004), and thus made them better practitioners.

Similarly, PT students with PBL backgrounds were perceived to be familiar with teamwork and had the positive traits needed to fit into a team and capitalize on the strengths of all team members (Gunn et al. 2012). Teamwork skills were a common theme in Wormley et al.'s (2019) study, in which PTs reported that PBL education had improved such skills, which encouraged diverse perspectives and mutual support. Indeed, PTs considered teamwork skills to be important throughout their clinical affiliation, were better able to communicate with their co-workers, and learned to work with group respect. Thus, small-group PBL fosters social skills and teamwork

throughout enhancing communication and teamwork abilities, thus facilitating HCPs' transition.

Applin et al. (2011) conducted a comparative descriptive study involving Canadian nurses to establish whether there was a difference in self-reported competency between nursing graduates from non-PBL and PBL programs (n=121). PBL graduates emphasized that teamwork in the PBL programme had helped their professional practice competencies, linking several skills to teamwork abilities, such as improving team-building and collaboration skills in clinical settings (Applin et al. 2011). Similarly, Consul and Medina (2014) found that Spanish nurses' PBL educational background significantly impacted their teamwork and professional activity, facilitating their collaboration with different professionals. Thus, teamwork is a pillar of primary care that is gained from PBL, potentially underpinning confidence and self-esteem within multidisciplinary teams (Consul and Medina 2014; Applin et al. 2011).

In a medical context, Sydney interns felt more prepared in terms of their collaboration skills, as PBL contributed to their internship performance (Dean et al. 2003). Moreover, most PBL graduates covered teamwork effectively and regarded it as one of the most frequently used practice competencies (Prince et al. 2005); felt well prepared and very satisfied in terms of collaboration with other health professionals (Antepohl et al. 2003); and scored significantly higher than their peers in collaboration with other healthcare workers (Hill et al. 1998). Teamwork is vital, helping to prevent mistakes, and facilitators during PBL should focus on students collaborating iteratively to build a strong, cohesive team.

Although the above mentioned studies argued that PBL improved teamwork abilities in practice, Cheng's (2009) study of graduate dental hygienists in Hong Kong suggested that teamwork was not applied because of the nature and culture of the workplace. Chinese employers prioritize communication with patients over colleagues, and dental hygienists communicate with employers through non-verbal facial expressions. Thus, Cheng's survey reported a significant decrease (50%) in both communication and teamwork, placing them among the least-used skills, and not all interviewees agreed that they had learned these skills from PBL. However, PBL encourages active participation in discussions, by encouraging silent colleagues to

engage as facilitators, thus ensuring that all students participate. This suggests that the one-way communication in Cheng's participants' workplace might have led to a sharp decline in teamwork ratings.

3.2.4.1.5 Accountability, Leadership Ability and Dealing with Conflict

Nursing and PT studies reported that PBL improved accountability in practice (Wormley et al. 2019), leadership ability, and dealing with conflict (Williams et al. 2012).

Accountability involves accepting responsibility for procedures, obligations, and roles, promoting behaviours and self-regulation to positively impact professional and patient outcomes (Wormley et al. 2019). Wormley's phenomenological study examined the development of core values in a modified PBL program for PT students, finding that small-group PBL experience enhanced students' accountability standards by offering performance feedback through self-reflection, peer evaluation, or faculty comments. This result was similar to previous PT studies (Schmidt et al. 2011; Larin et al. 2010), which suggested that development of accountability and patient interaction are crucial components of conversion to practice. Therefore, PT interns reported that they felt responsible for ensuring that the whole group worked and learned together, as in PBL, transferring the expectation of commitment and preparation from PBL to their clinical affiliations (Wormley et al. 2019). Thus, completing a project in PBL and learning to divide responsibilities helped to demonstrate accountability, and this played an important role in practice, with students realizing how their responsibility and roles had evolved towards becoming PTs.

Williams et al. (2012) conducted an ethnographic qualitative study with 45 graduate nurses to understand how they described the contribution of CBL (context-based learning: a PBL process) to their professional practice. CBL influenced leadership ability and dealing with conflict in practice. Graduate nurses gave credit to the CBL program, as they were described as competent leaders, felt comfortable taking on leadership roles within HCPs, promoted respect, and developed appropriate strategies to make them better nurses and leaders (Williams et al. 2012). Moreover, nurses learned conflict resolution skills during the CBL process, which helped them to handle

difficult comments and situations in practice, and deal with discomfort with coworkers after graduation (Williams et al. 2012). Experience with conflict and classroom discussions made them more comfortable asserting themselves in professional practice.

3.2.4.2 Cognitive ability

This section has seven subthemes including clinical decision-making, information-gathering, self-aware, clinical knowledge, evidence-based practice, critical thinking and problem-solving (Figure 4).

3.2.4.2.1 Clinical Decision-Making

Midwifery, nursing and OT studies found that PBL improved clinical decision-making in practice (Figure 4). Nallen et al.'s (2018) qualitative study investigated the impact of Enquiry-Based Learning (EBL) on midwifery clinical practice among fourteen graduates, focusing on transferable skills and perceptions of EBL's influence on decision-making. Participants reported that clinical practice improved, with increased autonomy in their decision-making (Nallen et al. 2018). Moreover, a phenomenological study of nursing students found that PBL enhanced their clinical decision-making skills by enabling them to prioritize patients' problems, followed by curiosity-driven investigation and discovery of information about the patient and disease, and finally the actual outcome of patient treatment and management (Chikotas 2009). Thus, OT PBL students in practice placement learned that OTs' daily tasks involve decision-making processes, where they must find information and make their own decisions (Whitcombe 2013b). Consequently, if students can demonstrate that they can make appropriate clinical decisions in class, these skills will eventually appear in the practice setting.

3.2.4.2.2 Information-Gathering

Information-gathering was found in four studies (Figure 4). Spalding and Killelt (2010) aimed to identify and evaluate OT students' views of the effectiveness of PBL practice placement in facilitating their learning. OT participants appreciated the PBL programme's focus on asking for more information, as it is crucial in real-life situations to gather data from caregivers, patients, and HCPs. Similarly, PBL students

emphasized the importance of accessing information in OT, as it is impossible to know everything and information may be outdated. Thus, lifelong learning skills were deemed important, and developing these skills is essential in any practice environment (Whitcombe 2013b).

Schmidt et al. (2006) investigated the long-term effects of PBL on the professional competencies of graduate doctors in the Netherlands. Although traditional school graduates rated themselves as having slightly more medical knowledge and there were no major differences in general academic competencies (e.g., writing papers or conducting research), PBL graduates rated themselves as having much better competencies in information gathering. Likewise, PT students found that aspects of their curriculum supported their transition to primary healthcare practice: for example, exposure to EBP enabled them to look up information, which could be very hard without experience (McMahos et al. 2016). Thus, studies indicated that PBL improved information-gathering in practice, with competencies in knowing how to search databases and literature.

3.2.4.2.3 Self-Awareness

Graduate nurses described themselves as learning self-awareness through the CBL process and actively seeking feedback to identify areas for improvement (Williams et al. 2012). Indeed, PT linked self-awareness to self-reflection, by considering how the PBL curriculum's facilitative elements provide constructive criticism (Wormley et al. 2019). Thus, PBL students improved their weaknesses and identified strengths through opportunities for feedback, allowing for improvement and growth, and in practice they sought informal feedback on performance and documented this formally in clinical performance tool sheets or weekly goals (Wormley et al. 2019). Hence, the feedback sessions allowed PBL students to be more receptive to constructive feedback in clinics and work to turn identified weaknesses into strengths.

3.2.4.2.4 Clinical Knowledge

Clinical knowledge refers to information concerned with clinical subjects, such as diseases, pathogenesis, mechanisms, diagnosis, and treatment affecting patient decisions and outcomes (Gifford 2011). An OT study revealed that PBL equips

graduates with general knowledge for effective care delivery and planning, helping their transition from students to novice professionals (Reeve et al. 2004). Although some OT graduates were sceptical about PBL's impact on clinical knowledge and abilities, Reeves et al.'s study revealed the views of OT postgraduate diploma students, making it challenging to generalize to undergraduate students' perspectives. Indeed, a majority (71%) of speech and language therapists reported useful knowledge in clinics derived from PBL process work, and 58% found PBL course preparation satisfactory for clinics, while 42% found it unsatisfactory (Leahy et al. 2006). This may be attributed to the lack of clinical knowledge about therapy techniques reported by Leahy's participants.

In contrast, Cheng (2009) found that dental clinical knowledge gained from PBL was not applied in the workplace, even if professional knowledge is expected to improve through consistent teacher evaluation during academic study. Their survey results showed that dental knowledge decreased by 12.5%, while interviews showed that only one participant appreciated professional knowledge improvement after graduation, while the rest (17) had opposite opinions. This negative result is attributed to the nature of the work environment in Hong Kong, where dental hygienists explore newly emerging dental techniques in the work environment and there is no mandatory continuing professional development after graduation (Cheng 2009). Overall, Reeve et al.'s (2004) and Leahy et al.'s (2006) studies suggested that PBL improved clinical knowledge in practice, whereas Cheng (2009) found that professional knowledge was lacking because of the nature of the work environment.

3.2.4.2.5 Evidence-Based Practice

Evidence-based practice (EBP) refers to HCPs integrating research evidence, patient values, and clinical expertise to provide optimal patient care (Upton et al. 2014). EBP is a core value in the PBL curriculum, as students search for current literature on studied topics. PT students found that aspects of their curriculum supported their transition, including exposure to EBP, which led them to look up evidence and feel able to communicate their findings (McMahos et al. 2016). Indeed, participants in a focus group discussion repeatedly emphasized satisfaction with the EBP process as a skill developed in PBL sessions, which involved identifying problems, searching for

relevant evidence, critically evaluating evidence, consolidating information, and evaluating findings (Wormley et al. 2019). This was reflected in practice, where PTs found that patients were more comfortable and responsive when well-thought-out care plans were formed because they made additional effort to obtain reliable sources from the literature.

Nursing graduates indicated that EBP was a major focus of their PBL programme, giving them the clinical skills needed to stay informed and practice efficiently (Applin et al. 2011). Similarly, nurses learned to search through CBL: one respondent reported that she was relied upon to undertake such searches because she could do so fairly quickly and knew how to find evidence-based information (Williams et al. 2012). Thus, PBL improved nurses' EBP, provided a strong foundation for PT beginners, boosted patient confidence and resulted in use of the best evidence among practitioners.

3.2.4.2.6 Critical Thinking

Midwives reported a positive shift in their critical thinking as a result of PBL courses, which taught them to constantly think critically and analyse their actions, and felt that they questioned things more instead of just taking them at face value in practice (Nallen et al. 2018). Indeed, through addressing issues in small group discussions and research skills, generating information and dialogue on specific nursing issues, PBL supported nurses' competency to enter practice and increased job satisfaction by enhancing their critical thinking and reflective skills (Applin et al. 2011). Moreover, PBL empowers nurses to think critically by providing the skills to search for answers through diverse resources (Chikotas 2009), and CBL graduates described themselves thinking critically in patient care because that was how they had evolved as nurses (Williams et al. 2012).

Research with dental hygienists revealed mixed results on critical thinking skills. The average value decreased slightly in the questionnaire, but most interviewees praised the continued use of critical thinking in the workplace (Cheng 2009). However, Cheng revealed that critical thinking deteriorates because the duties of dental hygienists are restricted by law, requiring supervision to finish their procedures. Generally, the studies indicated that PBL improved critical thinking in practice. This is considered a

transferable skill in midwifery and nursing (Nallen et al. 2018; Williams et al. 2012; Applin et al. 2011; Chikotas 2009), and medical graduates in Sweden felt very satisfied and well prepared in terms of critical thinking (Antepohl et al. 2003), whereas dental hygienists showed contradictory results between questionnaires and interviews (Cheng 2009). This indicates a positive change in HCPs' perception of critical thinking due to PBL. Finding solutions to problem-based scenarios broadens perceptions beyond private opinions and promotes broader understanding.

3.2.4.2.7 Problem-Solving

In OT practice, students learned that practice involves knowing how to implement problem-solving processes for professional decision-making (Whitcombe 2013b). Reeves et al. (2004) found that 64% of OT graduates viewed that the PBL program significantly enhanced their problem-solving skills, regardless of administrative or medical roles, offering valuable knowledge on actual problem-solving processes compared to colleagues without PBL experience and enabling faster information-gathering. Likewise, PTs identified active participation in PBL in terms of pedagogical approaches as beneficial for enhancing the problem-solving that they believed was necessary for primary healthcare practice (McMahos et al. 2016). They admitted that they were able to use and apply existing skills in new scenarios, including problem-solving, and that this was particularly relevant to setting up practice (Gunn et al. 2012).

Nurses recognized the direct effect of PBL on problem-solving and analysis compared to colleagues with the same professional experience, as they were prepared to handle and solve various clinical nursing problems (Consul and Medina 2014). Midwifery graduates also reported that they were more likely to think of other ways to solve problems because of PBL, and that there is always another way to overcome something (Nallen et al. 2018). Furthermore, PBL dental hygienist graduates excelled in problem-solving and task performance compared to non-PBL graduates, as they had learned data analysis, hypotheses creation, problem decision-making, research and information synthesis (Cheng 2009). Moreover, medical PBL graduates rated themselves as having much better competencies in problem-solving, having gained extensive experience as students (Schmidt et al. 2006).

Overall, HCPs reviewed scenario data in PBL, and generated ideas and theories linking problems with solutions, which is considered integral to the PBL process. This problem-solving approach enabled HCPs to function effectively in modern healthcare environments. Thus, all studies indicated that problem-solving skills gained from PBL courses helped HCPs in practice.

3.2.4.3 Task-supporting ability

This section has six subthemes including self-directed learning, holistic care, being a patient advocate, client management, ability to work and plan efficiently and preventive care (Figure 4).

3.2.4.3.1 Self-Directed Learning

Most of the 13 studies reviewed indicated that participants assessed themselves to be active, autonomous and self-directed learners (Figure 4). OT studies found that PBL participants realized that this knowledge would prepare students to be lifelong learners, as it is a skill that needs to be developed throughout their working lives (Whitcombe 2013b). OT students appreciated thinking about complex cases, developing clinical thinking, and preparedness to engage in complex situations in PBL education, meaning that they would be more prepared as independent HCPs in the future (Spalding and Killett 2010). Moreover, PT participants demonstrated active learning abilities in both classroom and clinic environments, as PBL's independent research enabled students to master information, immerse themselves in patient conditions and answer questions (Wormley et al. 2019). Self-motivation is linked to self-directed learning, and PBL encouraged PTs to engage with practice and be self-motivated throughout their careers, including discovering what they don't know and finding the information required (Gunn et al. 2012).

Nursing studies found that PBL enhanced self-directed learning in practice. Consul and Medina (2014), Williams et al. (2012), Chikotas (2009) and Applin et al. (2011) found that they viewed their independence in practice as a skill learned from PBL. Participants viewed lifelong learning and self-directed learning as outcomes of PBL influencing clinical practice: they were able to train independently, realising that PBL patterns were similar to those used in their individual practice settings (Chikotas 2009).

Indeed, participants appreciated PBL's collaborative approach to problem-solving, which promoted self-directed learning by enabling them to independently search for information and developed their professional competencies (Applin et al. 2011). Thus, they considered themselves open to lifelong learning, eager to seek knowledge, and able to find good information independently (Williams et al. 2012).

Consul and Medina (2014) found that nurses were more independent in determining appropriate care by maintaining up-to-date knowledge. This enhanced tolerance in biased situations, promoting creative and critical thinking and consideration of contradictory evidence. PBL promotes a sense of responsibility: PBL students participate in autonomous learning management, and as professionals, they manage nursing care more autonomously, gain knowledge through practice, and build evidence-based decisions independently (Consul and Medina 2014). Additionally, independent learning in dental hygienists received the highest positive responses among all skills, and the ability to search independently was the first answer respondents gave when asked about the skills gained through PBL (Cheng 2009).

Previous findings support the assertion that the PBL approach inculcates the traits of self-directed, independent and lifelong learning in medical practice (Schmidt et al. 2006; Prince et al. 2005; Dean et al. 2003; Hill et al. 1998). Overall, lifelong learning aligns with the PBL methodology in terms of acquiring self-directed learning skills and developing lifelong learning beliefs, facilitating the transition from student to professional context. Literature suggests that PBL gave HCPs the ability to think independently with the necessary skills to search for answers through various resources. Thus, self-directed and independent learning acquired from PBL improved HCPs' practice by requiring practitioners to independently update their professional knowledge.

3.2.4.3.2 Holistic care and Patient Advocacy

Holistic care was found in seven studies, whereas being a patient advocate was found in two (Figure 4). As a professional identity, OTs focus on the whole person, not just one aspect of their illness, playing a crucial role in modern social and healthcare by promoting holistic care values among HCPs and playing a role in innovative service

design and development (Whitcombe 2013b). OTs' studies emphasize holistic care as an important effect of PBL by focusing on all aspects of a person, considering what is meaningful to clients and others (e.g., family or caregivers). This reflects the holistic approach adopted in PBL scenarios (Whitcombe 2013b; Reeves et al. 2004) and supports medical literature that asserts that a PBL approach inculcates features of holistic care into medical practice, as PBL graduates were more prepared in personal and professional skills, including estimating the impact of multiple variables on patients' health and disease (Dean et al. 2003).

PTs found that one strength of PBL in practice is its holistic approach to patient management, which is emphasized as a basic component of programmes for caring and interacting with patients (Wormley et al. 2019; Gunn et al. 2012). Likewise, PBL nursing graduates were more likely to engage in holistic practice by considering patients holistically, focusing on the overall picture and addressing their needs, including social, physical, financial, spiritual, and mental aspects (Williams et al. 2012; Chikotas 2009). Indeed, Chikotas (2009) argued that holistic treatment has not been addressed in the nursing or medical literature, and that the PBL approach lends itself to teaching holistic clinical decision-making by reinforcing and reaffirming the aspects that are different for each patient.

Moreover, PBL encourages OTs to think about the client and all the problems that affect their life and how these affect their occupation and illness (Whitcombe 2013b). PBL teaches nurses how to be patient advocates, with awareness of patients' right to make independent decisions (Williams et al. 2012). Overall, knowledge of age, primary comorbidities and family issues helped PBL students to immerse themselves in cases, and when faced with similar situations in practice, they provided holistic care and advocated for patients to get the multidisciplinary help they needed.

3.2.4.3.2 Client Management, Ability to Work and Plan Efficiently, and Preventive Care

Speech and language therapists considered client management as an impact of PBL, reporting that the method used in PBL had become second nature (Leahy et al. 2006). Moreover, Whitcombe (2013b) found that knowledge of how to practice was

formulated through interactions with PBL pedagogy, not acquired individually through student placement experiences, as PBL equipped OTs with the needed practice skills (e.g., how to work with clients and manage caseloads). Medicine PBL graduates rated themselves better able to work and plan efficiently (Schmidt et al. 2006), and rated their preparation to practice higher than traditional graduates across different skills, including preventive care (Hill et al. 1998).

Summary

The transition to practice is a critical period, especially for new OT graduates. This comprehensive literature review initially reviewed OTs' practice transition experiences, presenting the historical context, the most recent context, and new graduates' preparedness for practice. It identified what it means to be a new OT practitioner, highlighting the transmission of knowledge and skills, and enablers and barriers faced by new OTs during their transition. The review also discussed 19 articles from ten countries to answer what is known about OTs'/HCPs' experiences with PBL influences in practice (although no study to date has been conducted in KSA). This review found that transition is complex, takes time, and can be a challenging, stressful, or even shocking experience. Studies suggest that OT graduates' preparedness to practice has improved over the years thanks to adaptations in programmes to support transition, improve the university curriculum and provide practice experience, such as placement and fieldwork models. However, moving to practice is still challenging, and new OT graduates face many enablers and barriers as they adapt to their new roles and responsibilities. Indeed, many aspects of PBL that influence OT/HCPs' practice, including interpersonal ability (e.g., communication skills, confidence, clinical skills, and teamwork), cognitive ability (e.g., problem-solving, critical thinking, information-gathering, and EBP), task-supporting ability (e.g., self-directed learning, holistic care, being patient advocates and client management).

Thus, this review highlighted gaps in understanding of new OTs' experiences in internships in KSA and how PBL influences new graduates during practice, highlighting the need for further contextual research to support successful transitions by understanding the challenges faced and identifying the factors that contribute to positive outcomes. Overall, this review emphasises the importance of supporting new OT graduates during practice transition. This will ensure high-quality patient care and

a stable healthcare workforce in KSA by graduating students with capabilities, skills and competence in health practice environments. The next chapter will discuss the present study's methodology.

Chapter Four

Methodology

4.0 Introduction

This chapter provides an overview of the IPA methodology used in this study, which provided a deep understanding of the experiences of OT interns in KSA and the influence of the PBL course. I will outline the theoretical underpinnings of the IPA method, including the thesis paradigm (ontology, epistemology, social constructionism, axiology), and the methodological framework to justify my use of IPA. I will also discuss how the language that people use to describe their experiences is integral to IPA, explain why I used IPA, and provide a critique and important considerations for IPA. Before discussing the thesis paradigm, I will reiterate the study's question, aim, and objectives.

Question

What are the lived experiences of transition to practice among OT internship students from the PBL programme at a university in KSA?

Aim

The study's aim was to investigate OT internship students' lived experiences and explore the influences of PBL when they move to practice in KSA.

Objectives

- To explore the lived experiences and meaning-making of OT interns during their internship.
- To explore OT interns' perspectives on the enablers and barriers encountered during their internship.
- To identify the influences of PBL during this transition, with a focus on investigating whether it influenced internship OT students' practice and if so in what ways.

4.1 Thesis Paradigm

A paradigm can be defined as "a set of basic beliefs or metaphysics that deals with ultimate or first principles" (Guba and Lincoln 1994, p. 107). According to Bateson (1972, p. 320), all qualitative investigators are philosophers in that "universal sense in which all human beings...are guided by highly abstract principles". These principles

combine beliefs about four terms: ontology, epistemology, ethics (axiology) and methodology (Denzin and Lincoln 2018). Epistemological assumptions (knowledge), values (axiology), and methods are inextricably bound together (Clark et al. 2021), and can be used to describe a body of beliefs which defines what can legitimately be studied and how this should be done (Whitcombe 2018b).

In this section, the “philosophical trinity” of ontology, epistemology, and axiology (Durant-Law 2005, p. 2) will be discussed. Moreover, I will combine constructivism with interpretivism, as such interpretation can be used to understand the lifeworlds of OT interns’ transition whilst appreciating that this knowledge can be socially constructed (Creswell 2018).

4.1.1 Ontology

According to Guba and Lincoln (1994, p. 108), ontology is the “the form and nature of reality”, and the reality of the human being in the world: “what is there that can be known about it?” Kafle (2011) claimed that the application of ontology to phenomenology is based on individuals’ ability to construct multiple facts for different situations, and that each individual experiences and interprets situations differently (Panza and Gale 2008).

I consider myself subjective and found that the reality in which I live comes from my experience in this life, while personal opinions and ideas must be viewed in a comprehensive and contextual perspective, and individuals’ opinions continually change. Therefore, my personal view of the world is rooted in my current reality, in which I believe that there are multiple rather than single truths, and individuals’ views or meanings of one specific topic may change or differ depending on individual or combined factors. My belief is thus aligned with the interpretative paradigm (Denzin and Lincoln 2018), and my role as a researcher is to consider an ontological question which aims to explore the reality of being OT interns in KSA, how they may be influenced by the PBL method, and what is the meaning of their transition experience.

4.1.2 Epistemology

Epistemology refers to the questions “What is knowledge?” and “What can we know?”, and seeks to answer the essential question, “How do we know what we know?” (Greco

1999, p. 1). In simple terms, it is the philosophical study of the scope, nature and theory of knowledge (Charles 2013). From a social constructivist view, it is created through social interactions (Flick 2022), including elements of linguistics (Miller 2016), which are important elements of IPA analysis. It sees knowledge as inter-subjective and fluid, and both participants and researcher as co-authors of knowledge (Finlay 2012). My role as a novice researcher is to develop a larger phenomenological picture of OT interns' experience in KSA and understand the influence of PBL on their internship. As an individual, former internship student and junior researcher, I am fully aware of the fundamental importance of knowledge, and I believe that reality occurs and evolves as a result of our involvement in our world, and the knowledge obtained would be subjective and co-created between me and the OT interns being interviewed.

4.1.3 Epistemological Standpoint: Social Constructivism (SC)

Crotty (1998, p. 42) defined constructivism from the social perspective as “the view that all knowledge, and therefore all meaningful reality as such, is contingent upon human practices, being constructed in and out of interaction between human beings and their world, and developed and transmitted within an essentially social context”. Constructivism asserts that knowledge occurs through individuals' interactions with the environment in the context of experience (Doolittle 2014). SC shares the interpretivist view that meaning is negotiated and created by human actors, and the same objective of understanding the world of lived experience (Andrews 2012). Moreover, ontologically, IPA “endorses social constructionists' claim that sociocultural and historic processes are central to how we experience and understand our lives, including the stories we tell about these lives” (Eatough and Smith 2008, p. 184). Thus, a constructivism paradigm adopts a relativist ontology (multiple realities), a subjectivist epistemology (researcher and participants create understanding) and a naturalistic methodology, and values transactional knowledge that is directed to producing reconstructed understandings of the social world (Denzin and Lincoln 2018).

This study proposes that the meaning of transition for OT interns in KSA is constructed by the experiences of the interns themselves, who are the only ones to know the experience of their transition from the beginning of the internship program until they become qualified therapists. However, IPA is committed to clarifying phenomena (events, relationships, or processes) and its interest is in how such processes shed

light on experiences as they are lived by an embodied, historical, socially situated person (Eatough and Smith 2017). Creswell and Poth (2016) stated that subjective meanings are not only based on the opinions of individuals but are also the product of social interaction with others that may affect individuals' lives. Therefore, the relationship between the researcher and the participant can be described as subjective, as I believe that in the qualitative research process, participants and the researcher are interrelated, and that this is an integral part of the process of understanding the phenomenon of transition from OT internship students' perspective.

SC posits that interns understand their own reality through interpretation/meaning of their experiences, which they must accept when dealing with social realities. Consequently, my knowledge construction was based on OTs' answers during the interviews, as knowledge was formed based on my interpretation/understanding of their experience. In other words, SC knowledge is incorporated into IPA, as it forms part of the hermeneutic/double hermeneutics circle (explained later), which contributes to the holistic picture. Thus, shared meaning was created through exploration of the themes, and each interview improved the clarity of meaning, as set out in the "Discussion" chapter.

4.1.4 Axiology

Axiology is a branch of philosophy that studies the question "What is of value?" (Bourne et al. 2017, p. 1). It refers to ethics and values, and should be grouped with basic beliefs (Denzin and Lincoln 2018). Axiology is often linked with the researcher's position or personal values (Teddlie and Tashakkori 2021). As a PhD researcher, one of my core values is credibility, and I have a strong ethical and moral commitment to gain new understandings and to benefit OT practice. I believe this study has accurately explored the lived experiences of OT interns in KSA and understood how their experiences were influenced by PBL. Given the paucity of studies on this topic, I hope that the knowledge and understanding generated from this thesis will be valuable to OT interns, therapists, lecturers, students, and teams developing OT curricula.

4.1.5 The Concept of Lifeworld

The methodology in this research deals with participants' lived experience. Phenomenology affords sensitivity to the lifeworld of others, and the lifeworld helps us

to understand our lived world (Ashworth 2016). Understanding participants' lifeworld informed the analysis to achieve a holistic understanding of the OT interns' lived experiences through phenomenological accounts of selfhood (the individual's sense of self, identity and effectiveness), sociality (how relationships with others, e.g. colleagues, friends and family, affect experience), embodiment (feelings about one's own body, including emotions), temporality (sense of time, biography, or duration), spatiality (understanding of place and space), project (the influence of things that are central to one's life), discourse (language and terminology used to understand and describe the situation) and moodedness (the feeling or tone of any situation) (Ashworth 2006, 2003). Finlay (2011, p. 125) explained that the lifeworld embodies the "intentional relationship between conscious, meaning-making human subjects and the external taken-for-granted, meaning-giving world". Thinking in terms of the lifeworld enriches the description of OT interns' experiences because it allows researchers to talk from a first-person perspective about the individual's involvement in their living environment (Ashworth 2016).

Ashworth (2003) argued that lifeworld fragments are heuristic: "perspectives or analytical moments of a larger whole which is the situated embodiment of the human individual" (p. 151). Considering the lifeworld enables a deeper understanding of individuals' lived experiences (Ashworth 2016) by examining their choice and interpretation of events and actions (May and Perry 2022). Any experience related to the individual's lifeworld cannot avoid meaning, as any occurrence is experienced as something which has meaning (Dahlberg and Dahlberg 2020). OT interns in this thesis were embodied beings and meaning-makers, already immersed in a physical, cultural, and linguistic world. I interpreted their experiences in the context of ongoing social and personal relationships, of which I was a part, and I acknowledge the role I played in meaning-making, data generation, and analysis.

4.2 Methodological framework

4.2.1 Qualitative research

A study's research design must be determined by the researcher's philosophy, research questions, and theoretical position (Holloway and Wheeler 2016; Ormston et al. 2014). Qualitative research arose as a response to the study of humans through a

positivist lens (Whitcombe 2018b), and includes a naturalistic and explanatory approach to the world. Qualitative researchers aim to interpret or make sense of phenomena in their natural environments through the meanings that people bring to them (Denzin and Lincoln 2018). In line with this study's aims, a qualitative method was adopted to explore and understand participants' experiences, as it allows flexibility in following the researcher's ideas (Creswell and Poth 2016). This facilitated in-depth and detailed investigations, generating rich data, studying individuals, and understanding participants' views, and thus allowed the results to be incorporated into their social reality (Bryman 2016).

The advantages of applying qualitative methodology are that it allows exploration, emerging and unlimited descriptions, and the discovery of new conditions or phenomena in return for confirmation of what has been assumed (Walliman 2021; Williams 2019). Thus, qualitative research is ideal to explore participants' lived experiences, examine how and why they behave in certain ways from their perspective, and understand their personal experiences (Creswell 2021; Tenny et al. 2017). In contrast, quantitative methodology was considered inappropriate for this study, because my aim was not to explain causal relationships, measure the frequency or intensity of phenomena or test hypotheses (Holloway and Galvin 2023). As little is known about the experiences of OT interns and the influences of PBL in practice, a qualitative approach was appropriate, given the exploratory nature of the study, due to its ability to facilitate a deeper understanding of the experience (Clark et al. 2021).

4.2.2 Phenomenological approach

The term "phenomena" is translated from the Greek as meaning "to show itself" and "to bring into light or brightness" (Heidegger 2010, p. 27). Phenomenology is a philosophical exploration of being (Smith et al. 2009), examining the nature of consciousness and how things show themselves (Van Manen 2017; Marion 2002). It seeks to understand individuals' lived experiences within their world (Neubauer et al. 2019), pursuing insight into the phenomenality of the primal, pre-reflective and pre-predicative meaning of their lived experience (Van Manen 2017). The philosophical movement of phenomenology is based on the ideas of several 19th-century philosophers, initially Husserl (1859–1938) and later Heidegger (1889–1976) (Kafle 2011). Its founder, Edmund Husserl, is credited for defining this in-depth exploration

of human experience as a specific research concept in the early twentieth century (Neubauer et al. 2019; Smith et al. 2009).

A phenomenological approach can “capture the richness, poignancy and ambiguity of lived experience, allowing readers to see the worlds of others in new and deeper ways” (Finlay 2009, p. 481). Ethnography and grounded theory were rejected because the purpose of this study was not to generate theories without reference to previous knowledge or understanding of cultural or social groups (Bryman 2016), but to understand individualised experiences and meaning-making. Moreover, phenomenology begins with a specific phenomenon, not a theory, and requires interconnection between the researcher and the researched (Finlay 2012). It thus begins with a specific research problem to depict the meanings of people’s experiences regarding the phenomenon to which they are exposed, regardless of their theories about its goal, reality, or causal interpretations (Husserl 1970). Various philosophers have discussed phenomenology (e.g., Husserl, Heidegger, Merleau-Ponty, Sartre and Gadamer), and IPA integrates their works to illuminate phenomenology as a singular and pluralist endeavour existing in a continuum (Tuffour 2017). However, Sloan and Bove (2014) state that there are two main types of phenomenology: descriptive (e.g., Husserl) and interpretative (e.g., Heidegger and Gadamer). This will be explained in more detail below.

4.2.2.1 Descriptive Phenomenology

German philosopher Husserl aimed to capture experience in its essence or primordial origin, without interpreting, theorisation or explaining (Husserl 2014), to understand how individuals subjectively described their experiences (phenomenon) and individual perceptions (lifeworld) (Husserl 1970; Tassone 2017). Husserl’s descriptive/transcendental phenomenological theory focused on capturing the nature of intentional experiences (Husserl 1980), how individuals made sense of the world through their interior process of thinking and knowledge (Tassone 2017), and how things appear to consciousness (Finlay 2012; Langdrige 2007), emphasising going “back to the things themselves” to objectively identify the essence and meaning of phenomena (Tufford and Newman 2010; Smith et al. 2009, p.7). Therefore, descriptive phenomenology is heavily indebted to Husserl (Eatough and Smith 2017), aiming to

develop “the hidden intentionalities of consciousness so that we may examine their essential structures in a new, presuppositionless manner” (Kearney 1995, p. 18).

Husserl suggested that we should strip off all conscious filters and our own preconceived ideas, strive to focus on everything in itself and step outside our daily experience or our natural attitude (Smith et al. 2009). Husserl realised that while trying to understand others’ phenomena, our preconceptions might attempt to make some things appropriate when they are not. Therefore, Husserl called for “epoché”, in which “all knowledge derived from sources other than what is directly given to consciousness has to be bracketed” (Eatough and Smith 2017, p. 178). This means that researchers’ knowledge of phenomena, underlying assumptions, judgements and beliefs that influence phenomena are rendered non-functional and put aside. Bracketing serves to focus on the phenomenon under study while removing the researcher’s preconceived ideas.

4.2.2.2 Interpretative Phenomenology

Recently, qualitative research has shifted from careful descriptions to a more interpretative approach, providing detailed, thick descriptions to enhance understanding (Rogers and Willig 2017; Frost and Young 2017). The interpretative approach aspires to understand and describe phenomena by examining how people experience themselves and the world (Rogers and Willig 2017). It suggests that individuals may not be aware of all aspects of their experiences and behaviours, and researchers must uncover hidden elements to gain deeper understanding (Tassone 2017). The purpose of interpretive phenomenology is to “invite the reader to enter the world that the texts would disclose and open up in front of themselves” (Kafle 2011, p. 192). As humans can find significance and meaning in their lives, Martin Heidegger (one of Husserl’s students) redirected phenomenology to an exploration of lived experience by searching for embedded meanings, allowing phenomena to be further implemented and explored (Sloan and Bowe 2014). This goes beyond Husserl’s description of essences and concepts (Flood 2010), focusing on human understanding through meaning-making and interpretation (Heidegger 1962).

Heidegger believed that it is neither possible nor useful to understand a phenomenon if experience is separated from its contextual world, as our relationships are

individually contextual (Smith et al. 2009). This distinctive difference in Heidegger's phenomenology is known as *Dasein* (Eatough and Smith 2017), which means "being there" or "being-in-the-world" (Spinelli 2005, p. 108), and confirms that humans cannot easily abstract themselves from the world (Heidegger 1996). Heidegger highlighted that *Dasein* is forever in a world of objects, people, culture, and language, and cannot be meaningfully detached from it (Smith et al. 2009). Thus, the person is an integral part of his/her lifeworld experience as it is lived (person-in-context), and we need the world in order to interpret what it is to be a part of it (Dowling 2007). Engagement with the world and lived experience are the essential features of Heidegger's account of *Dasein*, but he suggests that we must always come to such things through interpretation (Smith et al. 2009).

Heidegger and Husserl both worked in the progress and development of phenomena, and one can be seen as building on the work of the other. However, Husserl focused on the descriptive aspects of phenomena through generic descriptions of phenomena and essences without a fine-grained view (Sloan and Bowe 2014). That is, he afforded objectivity to the meanings of individual experiences (Smith et al. 2009). In contrast, Heidegger focused on the interpretation and meaning of individuals' lived experience, seeing that the researcher exists with essences of phenomena, and difficult to be removed (Sloan and Bowe 2014). Thus, observers cannot investigate things in their appearance or separate the way in which one identifies the essence of the phenomenon (Langdrige 2007). Moreover, Heidegger considered that interpretation, asking questions, and the researcher's understanding, through language and meaning-making, lead to embodied knowledge (Heidegger 1962): this is essential to IPA and underpins the use of the hermeneutic cycle (Smith et al. 2009).

4.2.3 Hermeneutics

Hermeneutics is derived from the Greek noun for "interpretation" and its main goal is to make meaning understandable (Grondin 1994, p. 20). It is a major part of IPA, and can be seen as a form of practical philosophy (Smith and Osborne 2015) and as the art and science of interpretation (Flick 2018; Tuffour 2017). Heidegger is accredited with developing hermeneutics (Dowling 2004). He realised the importance of understanding and giving meaning to individuals' experiences, and that one cannot ignore one's past experiences in the world, as understanding is a fundamental form of

human existence and interpretation is vital to this process of understanding (Lavery 2003). Literary or philosophical problems can only truly be understood through an understanding of their origin (Giorgi and Giorgi 2008). Therefore, Flick (2018) indicated that hermeneutical phenomena generally take the form of narrative during analysis to enable the researcher to develop a deeper understanding of what life looks like from participants' viewpoint. Additionally, any preconceptions related to the research should be used in the findings to add meaning and help define new concepts, differences and similarities within the research (Moule et al. 2016).

The hermeneutic circle lies at the heart of interpretive (hermeneutic) theory (Eatough and Smith 2017). The dynamic relationship between the whole and the part is considered on a series of levels: to understand the whole, one must look at the parts, and to understand any part, one must look at the whole in relation to its historical and cultural context (Smith et al. 2009). Therefore, the meaning of a sentence depends on the cumulative meanings of individual words and becomes apparent only when seen in the context of the entire sentence. Through this hermeneutic circle, one begins to understand and interpret the lived experience, as Heidegger (1962) stated: "In the circle is hidden a positive possibility of the most primordial kind of knowing" (p. 129).

IPA research uses the concept of double hermeneutics, wherein the researcher engages in a two-fold sense making process: "...the participants are trying to make sense of their world; the researcher is trying to make sense of the participants trying to make sense of their world" (Smith and Osborn 2015, p. 26). The researcher is central in analysing and interpreting individuals' experiences (Smith et al. 2009), seeking to explore surface meanings and reading between the lines for deeper interpretation (Finlay 2011). This "provides a tool to elucidate meaning as well as providing a reflexive lens for the researcher to review their own actions in the interpretative process" (Clouston 2019, p. 64-65). It encourages individuals to describe, reflect, comprehend, and interpret their experiences, while the inquirer tries to make sense of them (Smith and Eatough 2021).

The dynamic relationship between the part and the whole in the hermeneutic circle corresponds with IPA: the part corresponds to the encounter with the participant, and the whole is a drawing of the researcher's experience and knowledge (Tuffour 2017). The hermeneutic perspective is socially constructed, and interpretive phenomena are

related to the social constructivist paradigm, focusing on description and explanation, requiring researchers to achieve deeper self-understanding and knowledge through interpretation (Gray 2021). In this thesis, IPA defined the OT students' description of their internship period in detail and clarified how BPL affected their transition period, including what might be difficult or hidden.

To develop the thesis of hermeneutic phenomenology, IPA employs the works of four influential philosophers: Schleiermacher, Ricoeur, Gadamer and Heidegger (Smith et al. 2009). Schleiermacher suggested that our interpretive experience begins in misunderstanding, and there is a need for comprehensive hermeneutics that relate to all linguistic experiences, not just the interpretive concerns of specific disciplines (George 2020). His hermeneutics involved psychological (the individuality of the speaker or author) and grammatical (exact and objective textual meaning) interpretation, where a writer's unique intentions and techniques significantly influence the meaning of the text produced (Smith et al. 2009). He saw interpretation as a craft involving intuition and skills, aiming to understand a writer and text through an interpretative process, ultimately leading to "...an understanding of the utterer better than he understands himself" (Schleiermacher 1998, p. 266). Accordingly, the task is infinite, aiming to reconstruct the meaning of discourse, with interpretive analysts providing a unique perspective on the text beyond the author's (George 2020; Smith et al. 2009).

Ricoeur explained that meaning and experience are closely intertwined, and experience and language (an expressive force of experience) overlap, with experience revealing itself only when it is expressed in figurative, rhythmic, poetic language (Tuffour 2017). Textual and interactive interpretation allows subjective expressions to reconstruct original meanings, while hermeneutic phenomenology explores the aesthetic applications of language (Friesen et al. 2012).

Gadamer (2013) emphasised the significance of history and tradition in the interpretative process, arguing that interpretive skills are grounded in experiences and presuppositions and their suppression can hinder the process of interpretation. He recognised, with Heidegger, the complications that exist between the interpreted and interpreter (Smith et al. 2009), and they both followed the concept of time consciousness that is intrinsically linked to experience (Vessey 2007). Both also

believed, from a hermeneutic perspective, that understanding assumes a basic element of interpretation and presumptions (Moran 2002), where making sense of individuals' narratives requires close interpretation, but researchers might not be fully conscious of their preconceptions beforehand (Tuffour 2017). Thus, the dynamic and complex way they unpack the relationship between fore-understanding and interpretation might reveal more cyclical, robust reflexive bracketing (Smith et al. 2009).

4.2.4 Idiography

Idiography is an in-depth analysis of each individual case within its unique contexts that should be undertaken before making any general comments (Pietkiewicz and Smith 2014; 2012). IPA is fundamentally idiographic (Tuffour 2017), devoted to the detailed analysis of phenomenon (Eatough and Smith 2006), offering nuanced and detailed analysis through valuing each case on its own merits (Smith et al. 2022, 2009). It focuses on the particular, rather than a more general viewpoint, and exists at two levels: the first highlights the need for details, and the second explores how the participant understands phenomena (the lived experience). IPA researchers must meticulously follow this idiographic approach throughout the analytical process to make a detailed examination of the divergence and convergence of participants' experiences (Tuffour 2017). This allows specific statements about the participants, shaped by historical, cultural, geographical and temporal circumstances, leading to the generation of emerging and superordinate themes within the narratives of each participant case and facilitating contrast and comparison between participants.

4.2.5 IPA

IPA can be classified as an experimental psychological approach that draws inspiration from hermeneutics and phenomenology (Smith and Nizza 2022; Eatough and Smith 2017). It is not a philosophy, but draws on three philosophical constructs: Husserl's descriptive phenomenology, Heidegger's hermeneutics or interpretive phenomenology, and the idiographic approach (adopted from Husserl and Heidegger), which focuses on a specific person and makes meaning of their experience (Clouston 2019; Eatough and Smith 2017; Smith et al. 2009). IPA has the potential to interpret and understand people's experiences (Shinebourne and Smith 2010,2009), and offers accessible and practical guidelines for conducting phenomenological research (Smith

and Osborn 2015; Smith et al. 2009). Jonathan Smith introduced the IPA methodology and developed it as a form of phenomenology (Tuffour 2017). It concerns the experience and meaning of an individual's life and the daily lived experience of events (Smith et al. 2009), and how they feel about this experience (Smith and Eatough 2017, 2007). IPA also considers the individual's interpretations of the psychological and social discourses associated with the experience (Smith et al. 2009), and investigates "how people ascribe meaning to their experiences in their interactions with the environment" (Biggerstaff and Thompson 2008, p. 215).

The core of IPA is the meaning of individuals' lived experience and how a particular phenomenon is experienced (Eatough and Smith 2017; Finlay 2011; Smith et al. 2009; Langdrige 2007). IPA conducts detailed exploration of phenomena within the meaning attributed to the lived experience and the individual's personal perception (Smith and Osborn 2015; Smith 2011). It has "keen interest in understanding experiences of significant import, those which matter to individuals because they recast aspects of their lives through a demand for meaning-making" (Eatough and Smith 2017, p197). It also concerns itself with "unravelling the relationship between what people think (cognition), say (account) and do (behaviour)" (Eatough and Smith 2017, p. 201).

IPA has both descriptive and interpretive elements (Smith et al. 2022, 2009). Although its primary aim is to produce coherent and informed descriptions by understanding participants' world and describing what it is like, the second aim promotes interpretative analysis that positions "the initial 'description' in relation to a wider social, cultural, and perhaps even theoretical, context" (Larkin et al. 2006, p. 104). Through descriptive methodology, we can access individuals' experiences or descriptions of what happened to them; and through careful, explicit interpretative methodology, "...it becomes possible to access an individual's cognitive inner world" (Biggerstaff and Thompson 2008, p.215).

IPA differs from interpretative phenomenology by using double hermeneutics, and it differs from descriptive phenomenology, as it seeks to investigate in detail how individuals understand everyday conditions and provide meaning to them by adopting its essential feature: idiography. This is a systematic, detailed exploration of unique

personal experience that is interested in consciousness and concentrates on individuals' uniqueness and wholeness (Smith et al. 2021, 2009). Accordingly, "Without the phenomenology, there would be nothing to interpret; without the hermeneutics, the phenomenon would not be seen". (Smith et al. 2009, p. 37).

Using the IPA approach allowed me to gain knowledge from OTs' perspectives and provide them with a voice to reveal their individual stories, their own struggles, and how PBL influenced them to become OTs. There was a feeling of sympathy with the participants because of the similar experience that I had during my internship and my awareness of some of the challenges that OTs may face during the transition to practice. However, I had no idea about most of the challenges they faced, and the OTs' thoughts and feelings were identified and the differences between their experiences and my own thoughts and feelings were something to be acknowledged. After looking at what the interns told me about their inspiring experiences, even though they faced such hardships on their own journeys to becoming OTs, I was amazed at their ability to overcome the various challenges they encountered. Thus, IPA offered the potential to build a holistic picture to explore and make meaning of OT interns' lived experiences. It enabled me to explore and "give voice" to the OT interns' concerns, understand how PBL influenced their experiences, and contextualise and "make sense of these claims and concerns" (Larkin et al. 2006, p. 102). However, IPA has methodological limits, as discussed in the next sections.

4.3 Language and IPA

Language is a medium of communication, and description in qualitative studies requires that facts are presented in the language of everyday life, while phenomenological descriptions re-present events in other terms (Sandelowski 2000). Physical expression and language cannot be expressed in numbers, especially when dealing with phenomena surrounding human experience. Interpretations of experience are usually shaped through language, where IPA gives a central place to experience "while acknowledging the multiple influences on it; its historical and cultural situatedness, including language and social norms and practices" (Eatough and Smith 2006, p. 119). Phenomenological authors such as Heidegger, Sartre and Merleau-Ponty argued that humans cannot escape the historical accuracy of their

understanding, which is an integral part of the world of language and social relationships (Tuffour 2017; Finlay 2011).

Linguistic commentaries are central to IPA's initial exploratory commenting, which seeks to analyse the language and metaphors used and make exploratory notes. The participant's specific use of language can be explored through the analyst's focus on showing how the content and meaning have been presented (Smith et al. 2009). According to Eatough and Smith (2006), the aim of considering language is to understand how participants make sense of their lived experience and how the researcher makes sense of participants' sense-making. Therefore, examining the language participants use is vital to understand how and why participants has concerns 'their lived world', and to identify more abstract concepts that can help the researcher to make sense of their patterns of meaning (Smith et al. 2009).

Husserl (1989) claimed that the place of language in the interpretation and description of experience lies along a range of phenomenological concepts in which experiences come before language, and that experience itself is a construction of the language one speaks (Polkinghorne 2005). However, phenomenological research draws on strong language and writing skills, and requires linguistic and critiquing skills, as attaining phenomenological understandings and ideas and putting them into written language is an enormous challenge (Van Manen 2017). Indeed, IPA analysts must strive to find the right words to describe participants' ideas or feelings to properly express their experience. This was further complicated and took more effort and time for me, as I had to translate Arabic to English; the interviews were in Arabic, and I had to analyse them and then translate and choose the right English words to describe the interns' ideas and feelings.

Smith et al. (2009) explained that linguistic commenting represents one of three areas required for interpretation or exploratory commenting (the others are descriptive and conceptual). This includes pronoun use (I/we), laughter, pauses, functional aspects of language, tone, repetition, and degree of fluency (hesitant or articulate). Moreover, Smith mentioned that metaphor can be a particularly powerful component of linguistic analysis that links descriptive comments with conceptual comments and opens the possibility of discussing a range of conceptual meanings. Thus, linguistic comments were used in this study, which considered the metonymies, binary opposites,

metaphors, description and context used by the interns.

4.5 Why IPA?

When considering appropriate qualitative approaches, both grounded theory and ethnography were rejected (Section 4.2.2), and the phenomenological approach was adopted to achieve an in-depth inquiry into OT interns' lived experiences and meaning. IPA is not the only approach in phenomenological research. However, descriptive phenomenology was rejected, as the bracketing process would hinder deeper understanding of the phenomenon (Smith et al. 2009), and would not allow my comprehensive understanding to go beyond description to interpretation by investigating the context and meanings embedded within the OT interns' experiences. Moreover, Heidegger's interpretive phenomenology was rejected, as it lacks focus on individual experience (idiographic) and the two-fold sense making process (double hermeneutics), and I considered that OT interns were the most important part of this study and their stories should be the ones being told, not my experience. Consequently, I adopted IPA as a methodology that would follow idiographic and dual-aspect analysis to try to make sense of the interns' world (Smith et al. 2009). These two features helped me to find meaning from each intern's world and try to make sense of their sense-making.

During the inception and design of this thesis, thematic analysis was the methodology that I thought was most suitable for my research, but after attending several research-related courses and following discussions with my supervisors, I decided to use IPA and then started the work. Thus, I rejected Braun and Clarke's (2006) thematic analysis, which allows researchers to search for themes across entire datasets with flexibility in categorising and coding transcripts. Thematic analysis researchers often present themes that are common to a number of participants with less emphasis on their individual stories, whereas IPA focuses more on individual stories, although some themes are shared (Denzin and Lincoln 2018).

The individual in-depth analysis (idiographic) helped to address my research questions, which sought to know the unique lived experiences of OT interns in KSA. It would thus contribute to knowledge, helping to understand what the experience of transition meant for OT interns and understand the impact of PBL. IPA's epistemology

assumes a relationship between an individual's beliefs and words, meanings and experience (Peat et al. 2019). Thus, it allowed a degree of collaboration between the interns and me and facilitated my professional and personal growth. Moreover, IPA not only emphasises the role of the researcher in understanding participants' interpretations of their experience, as in Heidegger's phenomenology, but also includes a double interpretation where the OT interns understood their experience and I made sense from the interns' understanding.

Therefore, my rationale for using IPA was based on the nature of the study (a phenomenological approach examining subjective everyday experiences), its clear six-step data analysis process, its focus on individual meaning-making (idiographic), its interpretive stance (double hermeneutic), and its embedded principles (descriptive phenomenology, hermeneutics and idiography), focusing on the existential lifeworld of individual perspectives. IPA not only allowed me to explore the experience of the OT internship student in KSA, but also engaged me with the resultant texts and questioned the results to gain a deeper understanding of the interns' individual experience, and to examine how they made sense of the impact of PBL on their internship.

4.6 IPA critique and important considerations.

The IPA approach, like all methodologies, has some limitations. It was initially criticised for lacking standardization and being riddled with ambiguities (Giorgi 2010), and for being mostly descriptive and not adequately interpretative (Hefferon and Gil-Rodriguez 2011; Larkin et al. 2006). However, as explained above, IPA has a three-phase approach (idiography, hermeneutics and phenomenology) that draws from three philosophical constructs: descriptive, hermeneutic and idiographic. IPA considers the lived experiences of the individuals as its focus and acknowledges the researcher's role as an active participant in the research and an integral part of the analytical process. Thus, IPA moves interpretation beyond description to capture the meaning for the individual embedded within the experience.

Giorgi (2010) also argued that IPA fails to meet basic scientific standards because it lacks rules directing the inclusion of all raw data, which can lead to researchers being irresponsibly selective, and that the non-prescriptive nature of IPA analysis prevents the subsequent verification of results by a second researcher. Smith (2010) disputed

this claim, arguing that IPA is qualitative and should not be considered equivalent to the specific processes of quantitative research and that the researcher's skill in mastering research processes has a major impact on research quality, since mechanisms exist to verify the results of IPA research, indicating that any reader can verify that its methodological steps are transparent, fully validated, and coherent. Indeed, supervisors can check PhD students' analytical processes, and it is possible to verify that each theme is supported by sufficient participants' quotes to illustrate how the topics appeared. Therefore, by adhering to the guidelines provided by Smith and colleagues, efforts were made during writing this thesis to ensure that the method was clear (Chapter 5).

Tuffour (2017) identified four practical and conceptual limitations of IPA. First, Willig (2008) argued that IPA is like other phenomenological studies where language is not integrally recognised. However, Smith et al. (2009) refuted this criticism, as IPA's primary goal is to gain insight into experience, so it is always intertwined with language, as meaning-making takes place in the context of metaphors, discourse, and narratives, and language is viewed as "an interpretation of the meaning for a particular person in a particular context" (Smith et al. 2009, p. 195). Second, the question arose of whether IPA can precisely capture the meanings of experiences rather than opinions. Tuffour (2017) addressed this criticism by explaining that phenomena depend on researchers' experiences and participants' accounts, highlighting that both parties must have "the requisite communication skills to successfully communicate the nuances of experiences" (p. 4). I therefore strove to collect rich, comprehensive data.

Third, IPA focusses on perceptions, which can be problematic and limit our understanding. It assumes that phenomenological research seeks to explore the conditions that triggered experiences that exist in histories, past events or the socio-cultural field (Willing 2008). However, Tuffour (2017) criticised this, as phenomenology seeks to understand lived experiences without explaining why they occur, and Smith et al. (2009) argued that IPA uses idiographic, hermeneutic, and contextual analysis to understand the cultural position of the individual's experiences. Fourth, IPA's focus on cognition is not compatible with some aspects of phenomenology, and cognition's role is not properly understood (Willing 2008). However, Smith et al. (2009) argued

that IPA's prerequisite for meaning/sense-making, which includes formal reflection, clearly resonates with cognitive psychology.

Smith et al. (2022) cautioned that reading the literature before analysing data risks foreshadowing the findings. They called for researchers to ensure that knowledge does not become 'fore-structured' (p. 37), and for data generation strategies that encourage individuals to express themselves on their own terms. As explained above, IPA ontologically endorses SC and prioritises context and history, raising questions about the value of literature and other studies' findings to the particular individuals under study. However, in considering the role of the literature in IPA, I examined my philosophical positioning (section 4.1), and considered the role of the epoché, which "opens up the space for the possibility of discerning phenomenological meaning" and reduces "phenomenological meaning to appear, give, or show itself" (Van Manen 2017, p. 777).

IPA is an inductive approach, as I could not predict what results an analysis might yield, emphasizing the need for quality over quantity and for selective rather than exhaustive reading of the literature (Smith and Nizza 2022; Smith et al. 2022). This was clear in this research, as some themes that did not exist in previous literature (e.g., Covid) appeared after analysis. This required additional selective literature searches to identify studies that supported discussion of the new findings (Smith and Nizza 2022). However, the literature should not be prioritised, as IPA focuses on phenomenology as dynamic and emphasises subjectivity, interpretation, nuance, particularity and variation (Smith et al. 2009). Moreover, Smith et al. (2022) emphasised that IPA's questions are exploratory, not explanatory; directed toward meaning, not causes; and that they avoid imposing too many *a priori* theoretical structures. Therefore, IPA prioritises the participant's voice and not the literature.

Van Manen (2017) emphasised that phenomenology is concerned with exploring how things appear or present themselves (Heidegger's phenomena), while Jean-Luc Marion (2002) warned against constructing meaning in advance, defining it, and attributing it to a phenomenon or event by means of the subject, such as constructive approaches to phenomena. Additionally, Smith et al. (2022) introduced the concept of the third hermeneutic level in IPA, where the reader tries to understand the researcher who understands the meaning; the reader here could be the researcher, who deals

with the literature to understand the meaning. However, when considering the place of literature in IPA studies and my partial knowledge of the subject at the beginning of my PhD, I acknowledged that IPA explores highly personal, inductive, and important experiences in which participants should have priority, and that the literature may aid with double/triple hermeneutics without contaminating data collection or analysis in meaning-making. In agreement with Lincoln and Guba (1985), reality is a construct in the minds of the study participants in the sense that they are attached to experience, not literature or my knowledge. The participants, the literature, and I built an understanding of the phenomenon under investigation, with interns being prioritised.

Summary

IPA is a qualitative research method used to explore individuals' lived experiences and the meanings they ascribe to these experiences. IPA has three theoretical cornerstones – idiographics, hermeneutics and phenomenology – influenced by Heidegger's and Husserl's philosophy and focusing on participants' experiences through description, interpretation, and double hermeneutics. I used IPA to gain an in-depth understanding of the lived experiences and meaning-making of OT interns in KSA, enablers and barriers, and how PBL influenced their experiences. This chapter covered the research question, aim, objectives and purpose. It provided a detailed paradigm including ontology, epistemology, axiology, SC and lifeworld, and set out a detailed account of methodological frameworks. Finally, it looked at language and IPA, why IPA was chosen, and critiques and important considerations for IPA. I believe that the findings from this IPA methodology will contribute to a deeper understanding of OT interns' lived experiences in KSA and the impact of PBL on their practice, and will be useful in informing future practical/educational developments in the OT field.

Chapter Five

Methods

5.0 Introduction

This chapter justifies the research methods used and outlines the steps involved in conducting this study. It starts by providing sampling considerations and details of how OT interns were recruited. It also justifies the data collection (including data collection tools, the interview process, and the pilot study), transcription and data analysis, ethical considerations, and finally the trustworthiness of the research.

5.1 Setting and Recruitment

Six OT interns were recruited from one university in Riyadh, KSA (set out in Chapter Two). To avoid coercion, all recruitment was undertaken by an OT department member recommended by the head of the OT department to act as a gatekeeper after sending a letter of proposed access (Appendix 6), who made everyone aware of the purpose of the research (Hennink et al. 2020). A gatekeeper is an individual who controls access to participants (Singh and Wassenaar 2016). By involving gatekeepers, I demonstrated awareness of the potential impact of my role as a PhD researcher on recruitment and preventing coercion among participants. To address any concerns raised by the gatekeeper, I held four online meetings (Covid-19 restrictions) to answer any questions and discuss the research requirements with him.

First, I asked the gatekeeper to provide one participant to volunteered for a pilot interview (Section 5.3.3), and was later included in the analytical data after obtaining the participant's consent because of the difficulty of completing the necessary sample for this research. After checking the clarity and comprehensiveness of the interview questions and adding a question related to preparation for practice, I asked the gatekeeper to inform all eligible participants about the research, and OT interns who met the inclusion criteria (Section 5.2.2) were given my contact details and asked to send me theirs. Within a period of two to three months, five participants then volunteered to participate. I contacted them to provide more information and arrange the interviews.

After that, an invitation letter (Appendix 7) and participant information sheet (Appendix 8) were sent to these interns via email/WhatsApp to explain the purpose of the study, its objectives and the expected length of the interview. I gave them time to read this information and to contact me if they needed more information or to withdraw if they wished (no one withdrew). Subsequently, consent forms (Appendix 9/10) were sent, and interns were given time to draft any further questions before selecting an interview time. Written consent was obtained on the day of data collection. Copies of consent forms (signed online) were kept in the research file, and all letters sent were approved by the Research Ethics Committee (Appendix 11/12).

5.2 Sampling

In phenomenological research, participants are expected to be deliberately chosen to ensure that they all face the same phenomenon that will be explored (Bui 2013). They must have experience of the phenomenon and be able to express their awareness of it (Creswell and Poth 2016). Therefore, random sampling was considered inappropriate, and this study sample was not intended to be statistically representative (Ritchie et al. 2013). In line with the IPA methodology, Smith et al. (2009) recommended that the sample should be purposeful, homogeneous, and small. This approach was used to develop a deeper understanding of general perceptions of lived experience (Creswell and Poth 2016) and to provide an opportunity for a more focused investigation to understand a particular group with data relevant to the research question (Bryman 2016).

Obtaining a research sample was not easy in this study, as obstacles arose in the data collection process due to regulatory restrictions at the time of the pandemic. Therefore, access to the sample was changed: instead of hospitals or health centres, participants were accessed through one university. Interns were from the same cohort, studied the OT programme at one university, with the same curriculum, and reflected the gender demographic of the cohort (three males, three females). They shared relatively similar characteristics, such as age, internship experience, OT areas, hospital experience and previous practice (Table 6). While homogeneity may differ from study to study and generalisation is difficult with homogeneous groupings, homogenization is an essential feature for IPA studies (Smith et al. 2009), and my goal was that my results be transferable to other clinical settings, rather than statistically generalizable.

Table 6: OT interns' demographics

OT intern	Gender/Age	Internship experience	OT areas	Hospital experience	Previous practice	Previous PBL
Samia	Female/23	8 months	Neurology, orthopaedics, acute, outpatient, intensive rehabilitation and burns	Two hospitals (N and F)	Some clinical training and placement	Two modules
Saad	Male/23	10 months	Outpatient adult neurology, acute, orthopaedic, paediatric, inpatient spinal cord and hand therapy	Two hospitals (N and F)	Fieldwork	Two modules
Marram	Female/22	9-10 months	Orthopaedic, acute and outpatient adult care	Two hospitals (N and F)	Clinical training, fieldwork and summer training	Two modules
Adam	Male/22	6 months	Acute neurology, orthopaedics, and neurorehabilitation	One hospital (N)	Fieldwork and clinical training	Two OT modules
Mohammed	Male/23	11 months	Neurology, orthopaedic, burns, oncology and general paediatrics	One hospital (N)	Fieldwork and clinical training	Three OT modules
Anfal	Female/23	10 months	Orthopaedics, acute, neurology, paediatric, outpatient, inpatient, and hand therapy	Two hospitals (N and T)	Fieldwork and summer training	Two modules

5.2.1 Sample size

A sample of three to ten participants is recommended for the phenomenological approach to collect extensive details about individual experiences (Denzin and Lincoln 2018; Creswell and Poth 2016). Although the sample should be large enough to produce rich data (Willig and Rogers 2017), the idiographic approach in IPA studies requires in-depth accounts from each individual. Hence, small sample sizes are

congruent with IPA methodology, and between four and ten participants are considered appropriate for a doctoral thesis (Smith and Eatough 2021), as large samples may cause problems with excessive data being generated (Smith et al. 2009). Therefore, through the gatekeeper, I recruited a total of six OT interns (Section 5.1). Wagstaff and Williams (2014) argued that shared experience across a small group of people is considered an additional strength in qualitative research. The goal of IPA is to access the participants' worlds, and this depends on the participants' ability to express their experiences, not on the sample size.

5.2.2 Inclusion and Exclusion Criteria

The inclusion and exclusion criteria for this study are explained in Table 7.

Table 7: Interns' inclusion and exclusion criteria

Inclusion criteria	Exclusion criteria
<ul style="list-style-type: none"> - Student who had completed OT study in the university and started their internship period, to ensure that the experiences were based on comparable knowledge. - OT interns who had studied PBL classes within the same OT bachelor's programme, to ensure that their background experiences and knowledge were the same. - Interns with at least three months' experience in practising OT in any department. This was significant in ensuring that the internship students had enough knowledge, understanding and information to elicit rich data from their experiences to accomplish the study's objective and answer the research questions. 	<ul style="list-style-type: none"> - OT students who had not completed their bachelor study (e.g., fieldwork or summer training students) - OT students whose studies were not based on the same bachelor's programme. - OT students with less than three months' experience as internship practitioners (the internship period is one year).

5.3 Data collection

5.3.1 Data Collection Tools

To capture the basic principles of IPA, it is necessary to choose a data collection tool that allows the participants to tell their experiences (Smith et al. 2009). This study used semi-structured interviews (Appendix 13), which can be described as professional conversations that aimed to define participants' perceptions and get them to talk about their experiences and perspectives on the topic identified (Clarke and Braun 2013; Rubin and Rubin 2011). These interviews highlighted the interns' lived experiences, provided opportunities to state opinions about topics that were important to them and expand on their answers without restrictions, and enabled me to explore points of interest in more depth and take notes for analysis (Gray 2021; Brooks et al. 2018; Yeo et al. 2014; Barbour 2013). The interview questions were designed in light of the study objectives and my reading of the literature, directed towards the knowledge gap and discussed with my supervisors. This allowed me to focus on phenomenon of interest and exercise some control during sessions (Holloway and Galvin 2016).

The interviews contained open-ended questions and prompts designed to elicit richer data (e.g., "Can you describe how? Can you tell me more?"). This allowed interns to speak freely about their experiences (Noon 2018). I provided some information before starting each interview (introduced myself and the aim of the study) and the opening questions asked for interviewees' background (Appendix 13). These questions were designed to obtain demographic data and useful information about the university/PBL topics and teaching method, previous practice experiences, internship period and settings. These general questions helped interns to feel comfortable (Whiting 2008) and encouraged harmony before moving on to more specific questions (Kvale and Brinkmann 2015), which focused on the study's objectives.

5.3.2 Interview Process

During the COVID-19 pandemic, qualitative researchers increasingly used online data collection methods to help contain the spread of the virus (Lindsay 2022). Due to restrictions from the Research Review Ethics Committee, all interviews and communication with gatekeepers and participants were conducted online (e-mail, phone calls, WhatsApp, Imo). Although direct face-to-face interactions allow researchers to establish relationships with participants to encourage comfortable

disclosure of experiences and provide both verbal and non-verbal cues (Clarke and Braun 2013; Yeo et al. 2014), personal interviews over the telephone or the internet can mimic traditional approaches (Braun et al. 2017; Deakin and Wakefield 2014).

Interview dates were set via E-mail/WhatsApp after gatekeepers had provided participants' information. Specific dates for the interviews were selected (16 April to 14 June 2021) with arrangements for additional dates if appropriate. Online data collection has advantages, such as privacy, cost, time and flexibility (Archibald et al. 2019; Krouwel et al. 2019). Various types of technology and platforms were available, from which the interns chose Imo (audio and video software), which is accessible and easy to use in KSA (Davies et al. 2020). To encourage optimal sharing of experiences, participants were given the option to choose the format of their interview (audio or video). All participants chose audio only, and no technical challenges affected the interviews, such as internet delays, poor sound, or interview quality. Moreover, participants were given the option to conduct the interview in Arabic or English. All participants chose to speak Arabic, considering that they spoke most of the interview in Arabic and some sentences or words were in English.

Online interviews were conducted in a quiet space. All interviews were recorded with consent, using two phones (with high-quality microphones, second as a backup). Notes were taken during the interviews if needed. I told the interns in advance that the interviews were expected to last about 60 minutes; however, the duration varied from 41–58 minutes, with an average of 48 minutes. Further, I considered some appropriate steps (e.g., stopping temporarily) in case interns mentioned disturbing issues (e.g., remembering a bad experience or event). However, all the interviews were smooth, despite the participants mentioning challenges and problems (e.g., what happened to OT interns during the COVID-19 pandemic). Immediately after each interview, I noted my thoughts, context and interaction, which was useful in interpreting and analysis (Creswell 2014). This included my general impression of the interview, the intern's tone, and how easily they discussed or answered the questions. Finally, I had no difficulty following the semi-structured interview schedule due to doing a pilot interview and previous interview experience during my master's research.

5.3.3 Pilot study

To check the clarity and comprehensiveness of the interview questions, a pilot interview was conducted. This tests participants' understanding, how well the research questions work, and identifies difficulties and potential issues with lack of exhaustiveness (Bryman 2016). Hennink et al. (2020) recommended pilot interviews with individuals with similar characteristics to the main sample. Therefore, the gatekeeper provided contact details for one intern who met the inclusion criteria, and the interview was piloted in April 2021. The participant reported that the questions were clear and the interview flowed well. However, after discussion with the supervisors, a question related to preparation for practice was added, which provided important data and enhanced the depth of the discussion. Due to a shortage of participants, this pilot interview was included in the analytical data after obtaining the participant's consent and asking him the additional question. Thus, pilot and supervisor feedback improved the interview questions, investigations, and my interviewing skills, enhancing the research findings (Holloway and Galvin 2016).

5.4 Data Analysis

5.4.1 Transcription

According to Bryman (2016), analysis of qualitative interviews starts with verbatim transcription. After completing each interview, I listened to the recordings closely and then transcribed them in Arabic, writing any English words or sentences in Arabic letters. Laughter, pauses, and hesitation were included. For each interview, I read the transcription while listening to the recording to ensure rigour, trustworthiness and accuracy. The verbatim transcription process was long and tedious (a week per interview), but repeated listening to the audio recordings during transcription helped with the initial immersion in the data. After completing the verbatim transcription process, I moved on to the data analysis.

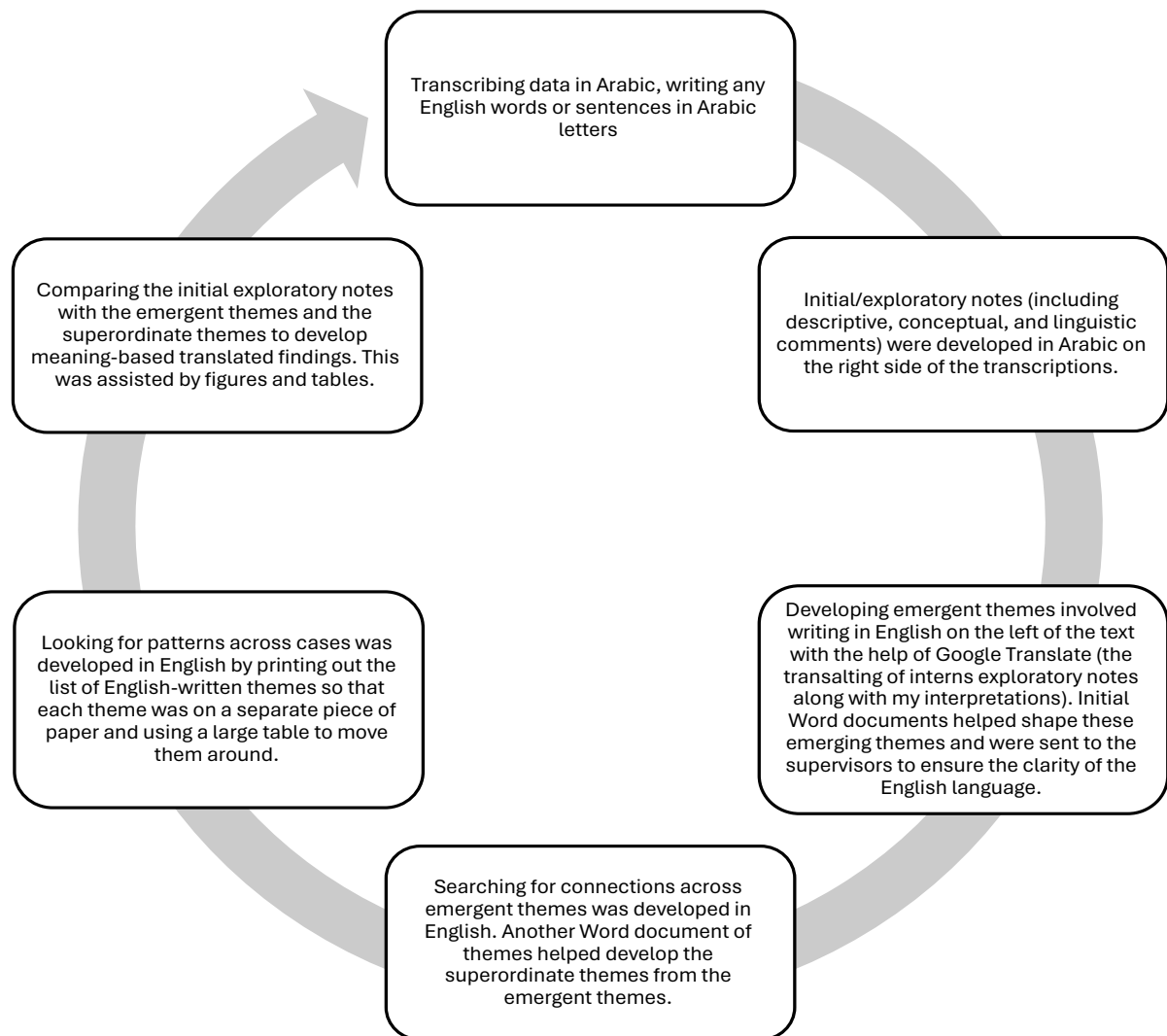
5.4.2 Data Analysis Process

IPA requires a comprehensive analysis of data and moves from participant to shared experiences, "private to subscriber", and from "descriptive to interpretation" (Smith et al. 2009, p. 79). Although IPA data analysis is systematic, it is not necessarily a straightforward linear process, as IPA is inherently complex even if it appears

sequential (Smith et al. 2009). IPA involves a flexible set of steps proposing the transition from interview transcripts to creating themes, and finally to superordinate themes. Smith's et al. six-step process provided me with a framework to demonstrate how themes were developed from the data, focusing on analysing how interns understood their experiences using verbatim quotes to create a narrative of their experiences (Smith and Osborn 2015; Smith et al. 2009).

To manage sensitive qualitative data and enhance research transparency, Figure 5 reflects the method of translating and analysing between Arabic and English. This translation method should enhance the researcher's engagement with data, leading to a deeper understanding of the participants' experiences without loss of meaning, increasing transparency in qualitative data interpretation and analysis, and managing data more sensitively (Ho et al. 2019). The process of translating was difficult and time-consuming, especially developing emergent themes to show the lived experiences of OT interns. I looked at what interns have stated in the Arabic exploratory comments (Table 8). Although I knew the general content of each comment, trying to translate and explain the meaning into English words while remaining close to the general meaning of the interns was difficult. Google Translator was also helpful in translating the interns Arabic exploratory notes (along with my interpretations) to English. These emerging themes were sent to the supervisors to ensure the clarity of the English language.

Figure 5: Procedure for translating and analysing data between Arabic and English.



As a novice IPA researcher, I was aware of the importance of good data analysis, hence using Smith's six steps (Table 8). As suggested, I used hard copies of the transcripts (Arabic: Appendix 14), enabling a closer investigation of the interns' experiences (Smith et al. 2009). Moreover, I used Microsoft Word for thematizing on the computer by managing, collating and organising emergent themes that linked directly to the voice of each intern (English: Appendix 15/16). The stage of IPA data analysis and presenting the results was long and complex, especially showing the lived experiences of OT interns and linking them to the context of previous education and how PBL affected their experiences. I believe that following the instructions of my supervisors and my attempt to work on analysing and presenting data and being transparent, which comes with patience, experience and competence, has enabled me to achieve this goal.

Table 8: Six-step data analysis process (Smith et al. 2009)

<p>1: Reading and re-reading. "immersing oneself in some of the original data" p.82</p> <p>In this step, I listened carefully to the interview recordings while reading and re-reading the text. Having transcribed the texts verbatim, I noted interns' responses and nuances. Listening to the audio recordings and re-reading the text helped me immerse myself in the data.</p>
<p>2: Initial noting "...examines semantic content and language use on a very exploratory level" (p .83), focusing on "Descriptive, Linguistic, and Conceptual comments" (p .84) and "deconstruction, strategies of de contextualization to bring into detailed focus the participant's words and meanings" (p. 90).</p> <p>In this step, I re-explored the text of the transcriptions by analysing each text line by line and making notes in Arabic on the right side of the paper, including descriptive, conceptual, and linguistic comments (Appendix 17). This process is difficult and time consuming, as it is a way of looking at what students have stated on the subject (descriptive), language (e.g., metaphors, pauses, pronouns, laughter, stammering, tone, repetition, degree of fluency; see section 4.3) and conceptual (more interrogative and conceptual level). I highlighted exploratory comments using different colours: descriptive comments were highlighted in green, linguistic comments in red, conceptual comments in yellow, and deconstruction in blue. This helped with the semantic content at the exploratory level and made it easier to appreciate the rich and detailed content of each interview. Although I knew the general content of each answer, trying to explain the meaning into words while remaining close to the general meaning of the interns was difficult. Therefore, I focused on understanding what the intern was trying to understand, and this may be seen as double hermeneutics.</p>
<p>3: Developing emergent themes: "mapping the interrelationships, connections and patterns between exploratory notes...This process represents one manifestation of the hermeneutic circle" (p. 91).</p> <p>In this part, I focused on the exploratory notes that I had previously written to the right of the transcriptions and on the original text, and considered the hermeneutic circle with descriptive analysis by extracting words, phrases, stories, points and basic</p>

characteristics of each intern and writing them in English to the left of the text (Appendix 17). These emerging themes used the language and identity of the interns, along with my interpretations. These themes "are not waiting to emerge but are borne out of close readings, careful considerations and systematic interpretation" (Shaw 2010, p. 196). I chose to use the initial Word documents (Appendix 15) to help shape these emerging themes to complete the hermeneutic circle, where the part and the whole are intrinsically intertwined. This inductive, data-driven process considers the fusion of the researcher's and participants' perspectives on the phenomenon being investigated, by navigating between the parts and the whole of the transcribed data (the hermeneutic circuit) (Smith et al. 2009). These emerging themes were sent to the supervisors to ensure the clarity of the English language and the correctness of the process.

4: Searching for connections across emergent themes: "development of a charting, or mapping, of how the analyst thinks the themes fit together" (p. 92).

In this step, another Word document of themes (Appendix 16) was created to help develop the superordinate themes from the emergent themes. The process was assisted, as Smith suggested, by using abstraction (identifying patterns between emergent themes), polarization (focusing upon difference instead of similarity), subsumption (bringing together a series of related themes into a single dominant theme from the cluster), contextualization (identifying the contextual elements within an analysis and attending to temporal, cultural and narrative themes), function (examining emergent themes for their specific function within the transcript, e.g., positive and negative presentation), numeration (the frequency with which a theme is supported) and then integration (bringing it together) (Smith et al. 2009, pp. 96-99).

5: Moving to the next case: "...moving to the next participant's transcript or account and repeating the process" p.100.

The previous steps were repeated for each intern. Smith et al. (2009) cautioned about the difficulty of finding new themes due to the influence of the analysis of the previous transcript on the analysis of subsequent transcripts. However, each case was analysed by evaluating each intern's lived experiences with IPA's idiographic commitment. Therefore, the idiographic focus was maintained,

and each intern's ideas and concepts were bracketed until all transcripts had been analysed. After completing the analysis, a theme chart was identified for each intern (Chapter 6).

6: Looking for patterns across cases: "laying each table or figure out on a large surface and looking across them...What connections are there across cases? How does a theme in one case help illuminate a different case? Which themes are the most potent?" (p. 100)

In this last step, I looked for links across cases by trying to capture the differences and similarity, convergence, divergence, patterning, and individual nuances within the participant group's experience (Smith et al. 2009). I printed out the list of written themes so that each theme was on a separate piece of paper, using a large table to move them around. This enabled me to explore spatial representations of how emerging themes relate to each other, and thus to recognise patterns (Smith et al., 2009). Then, I placed all themes that represented parallel or similar understandings together and positioned the contrasting themes next to them; then the super-themes and subthemes were colour-coded (Picture 1). The process was further assisted, as Smith et al. (2009) suggested, by using abstraction, polarization, subsumption, contextualization, function, numeration and then integration (explained above). This was necessary to ensure that superordinate themes were not selected based on numeration or prevalence; but based on their relevance and richness to the study aims. Six superordinate themes resulted from this final stage. Charts and tables in Chapter 7 explore the outcomes of these superordinate themes with a summary of the subordinate themes and subsequent superordinate themes.

5.5 Ethical consideration

Ethical approval was granted by Cardiff University School of Healthcare Studies Ethics Committee in February 2020 after minor amendments (Appendix 11). In late December 2020, I applied to the university medical research centre in KSA and gained approval in January 2021 (Appendix 12).

Interns were informed that interviews would be recorded and transcribed (with permission for quoting), identities hidden and pseudonyms used, including the name of the hospital. Interns were informed that the study's risks were minimal, such as the risk of compromising privacy, confidentiality, and anonymity compromise, and the potential harm to their physical, emotional, social, professional, or financial well-being. However, I explained that they might experience negative feelings or discomfort when sharing unpleasant experiences. I planned to pause and potentially stop the interviews to consider their feelings, offering them information about where they could seek further support if they needed it.

Interns were informed about the study aims, purpose, and that their participation was entirely voluntary and they could withdraw up to the point of data collection, and that data and consent forms would be stored according to Cardiff University's Governance and Compliance procedure and Data Protection Policy (2018). To ensure confidentiality, password-protected folders containing interns' names and pseudonyms, research files and information were securely stored in a personal server space at the university (and will be destroyed after five years). If any OT interns had unexpected disclosure (e.g., if the participants were to discuss malpractice in KSA), then the principal investigator in KSA would have been informed, as it is a requirement of KSA ethical approval from IRB (Appendix 12). More ethical considerations are presented in Appendices 8–11.

5.6 Trustworthiness

Trustworthiness is an 'umbrella term' that can be used to describe the methodological rigour of qualitative research (Baillie 2015). The use of the term "rigour" indicates the degree of confidence that the study was conducted systematically to ensure a high level of quality (Connelly 2016). The greater the rigour, the more likely it is that the outcome

will be considered reliable and relevant (Finlay 2006). Considering both the rationale of the researcher and the rigorous research process, this study considered the following points, taken from Baillie (2015), Leung (2015) and Connelly (2016) and adapted from Lincoln and Guba (1985).

5.6.1 Credibility

Credibility means that processes and tools are appropriate, and data and findings make sense (Baillie 2015; Leung 2015). This was promoted through member checking, peer debriefing, and prolonged engagement in the research setting. Member checking involves returning to the participants to check that the texts represent how they are feeling or checking the results at different stages of the analysis (Baillie 2015). Interns were told that they could read the completed transcripts and check their accuracy if they wished (Birt et al. 2016). While no one asked to read the full transcripts, findings were checked, with opportunities for feedback, questions, or changes to data if desired. Peer debriefing involves scrutiny by a peer researcher (in my case, supervisors at all research stages) who could provide support and challenge the researcher (Lincoln and Guba 1985). This external audit enhanced the credibility of the results (Baillie 2015), considering that the data analysis was individual and unique, given the nature of IPA.

Prolonged engagement in the research setting was applied by rich description of the participants, setting, and verbatim quotes in discussion and analysis. Given that the use of language to describe experiences is very important within IPA, I ensured that meaning was not lost during transcription from Arabic to English by translating the text by myself, then using the Google translate as a tool of comparison. The linguistic quotes transcriptions were presented in italics (Chapter Six), and also presented to the supervisors before and after using the proofreading service. I also allowed enough time for interviews and established trust and familiarity so that participants felt able to speak openly and honestly. Leung (2015) added that in assessing credibility, the challenge starts from the ontology and epistemology of the issue being studied; the choice of methodology must enable detection of phenomena in the appropriate context for it to be

valid; and the methods, sampling and procedures must be appropriate for the research paradigm. I believe I have achieved this.

5.6.2 Dependability

This refers to conducting the research in a dependable way that can be audited (Baillie 2015), with stability of data over time and over the conditions of the study (Connelly 2016). This was promoted through the audit trail of decision-making throughout the research process and being transparent, including records of all phases, documenting decisions and influences during the research (Connelly 2016; Baillie 2015). I kept a reflective diary as part of this audit trail. Thus, I explained my decisions at each stage and used appendices to explain the processes followed.

5.6.3 Transferability

Transferability refers to the potential for findings to be transferred to different settings and applied to different contexts (Connelly 2016; Baillie 2015). Providing a rich, detailed description of the context, location, and people studied can help to achieve transferability (Connelly 2016; Baillie 2015). This study has provided rich descriptions of the setting and participants. This supported the audit trail by providing transparent analysis and detailed accounts of the sampling method and decisions made.

5.6.4 Confirmability

This is confirmation of the researcher's position and influence (Baillie 2015), and the degree to which findings are consistent (Connelly 2016). This was promoted through an audit trail of analysis and methodology (Connelly 2016), and through reflexivity, through which a researcher consciously or unconsciously recognises and addresses their effect and influence on the research (Baillie 2015). I kept a reflective diary while planning and conducting this research and have shared my experiences of reflexivity in this study: see section 5.7 and the reflexive epilogue in the last chapter.

5.6.5 Authenticity

This is the extent to which researchers fairly and completely show a set of different realities and facts to convey the lives of the participants (Polit and Beck 2020; Connelly 2016). This was promoted by selecting appropriate participants (using purposeful, homogeneous sampling and inclusion and exclusion criteria) and providing a detailed and rich description of sampling and interns' demographics. The idiographic analysis of individuals through IPA supports these authenticity criteria.

5.7 Reflexivity

Reflexivity is the process of critically reflecting on oneself as a researcher (Lincoln et al. 2011), and is considered a technique for managing the researcher as an instrument (Guba and Lincoln 1981). As explained above, reflexivity can enhance confirmability, which is important to enable researchers to understand how their position and subjectivity can influence the study (Finlay 2017). In qualitative research, the reflective researcher should be open about their shortcomings and strengths by examining their influence on the research (Baillie 2015).

As a PhD researcher, I focused in depth on all thesis chapters, enhancing my knowledge and skills through IPA workshops, group discussions and conferences. I considered and explained the literature, background, and theories and demonstrated an understanding of the interns' social and cultural context throughout the study, suspending any judgments and preconceptions and focusing on what was in the data. Consistency was maintained by providing an audit trail and details of how I conducted this study, from the research processes of previous studies to the study's objectives, the steps involved in data collection and analysis, and even my discussion of the findings and recommendations.

I was committed to ethical recruitment of participants. The purposeful homogeneous sampling recruitment process was considered important to the degree of consistency, which would influence the context. The semi-structured interviews were considered in detail, and a comprehensive picture was provided of the purpose of the study. I ensured that interns felt free to speak in the interviews and considered potential disruptions. I encouraged them to express experiences and feelings in the language of their choice,

and gave them opportunities to add relevant information at the end. I attempted to ensure that the study was rigorous (Section 5.6), and my reflective approach also enhanced this, and was maintained through active discussions with my supervisors. I was committed to conveying interns' experiences and I worked within the ethical and professional standards I set (Section 5.5). This reinforced my commitment practice.

I ensured sensitivity towards the data by provided verbatim quotes in the results/discussion and ensured that meaning was not lost transcription from Arabic to English. This gave voice to the participants, carefully considering the meanings they generated and allowing the reader to check my interpretations while remaining focused on the aims of the study and the philosophical underpinnings of IPA. Although IPA required me to analyse the data within the hermeneutic circle, where the students themselves did not participate in the process, the interviews data were what they acknowledged and I immersed myself deeply in their personal statements. I showed the idiographic and cross-case themes through the development of subordinate and superordinate themes, constructed inductively from the data with a clear audit process. Using Smith's six-step analysis enhanced trustworthiness, transparency, and rigor (Table 8), and I maintained appropriate sensitivity to the data through analysis, exploration and interpretation.

I was aware of the limited number of PBL courses in the OT programme and how it affected interns' experiences and the study outcome. Thus, a reflective question arose: Would the interns' lived experiences be the same if the university's OT programme had been based entirely on PBL? This question could be addressed in future research. However, I believe this study provides the reader and the wider research community with interesting, useful and new knowledge, especially in the context of KSA. The study aims were achieved by developing a deeper understanding of the interns' transition experience, enablers and barriers, and how PBL impacted their internship.

Summary

This chapter initially discussed recruitment and sampling, including sample size and inclusion and exclusion criteria. I then explained the data collection tool, the interview

process and the pilot study. I also detailed the steps involved in IPA data analysis, including transcription. Then, I discussed the ethical considerations. Finally, I highlighted my position as a researcher by considering trustworthiness and reflexivity. The next chapter will explore the idiographic findings from the research.

Chapter Six

Idiographic analysis

6.0 Introduction

In this chapter, the descriptive account (idiographic analyses) of the experiences for each individual OT intern are presented. Each participant has been given a pseudonym throughout and all quotes used are anonymous to maintain confidentiality. Emergent themes from each OT intern are presented followed by a short biographical history description, and then a description of their individual experiences using their words. Any quotes presented in this chapter are presented after translating from Arabic including pauses. There are six participants in this study with similar demographics, Saad, Adam and Mohammed were males, and Samia, Marram and Anfal were females. All participants were from the same university (with different lecturers between male's and female's departments).

The exploratory comments were presented by different colours (Appendix 17), but in this chapter, the direct quotes 'normal text' is used to describe the descriptive comments. The quotes in '*italic*' represent the linguistic comments, whereas the 'underlined' describe conceptual comments. Additionally, the '**bold**' quotes represent my words during the interview, including the questions and responses to the participant's speech. Moreover, to make the context of the analysis clear to the narrative, the temporal context of the events was considered appropriate for the themes, starting with the participants' experience during the university period, the internship period and then how PBL impacted their transition.

When analysing the individual cases, I was struck by how the interns often referred to their relationships with lecturers, their supervisor, other interns, patients, hospitals, staff, peers and family. This was not a research question in the study and the interview schedule did not contain questions about interpersonal relationships in it. However, in keeping with the principles of IPA, I considered the OT interns the experiential experts, and the flexible inductive methodology allowed them to establish relationships as a core

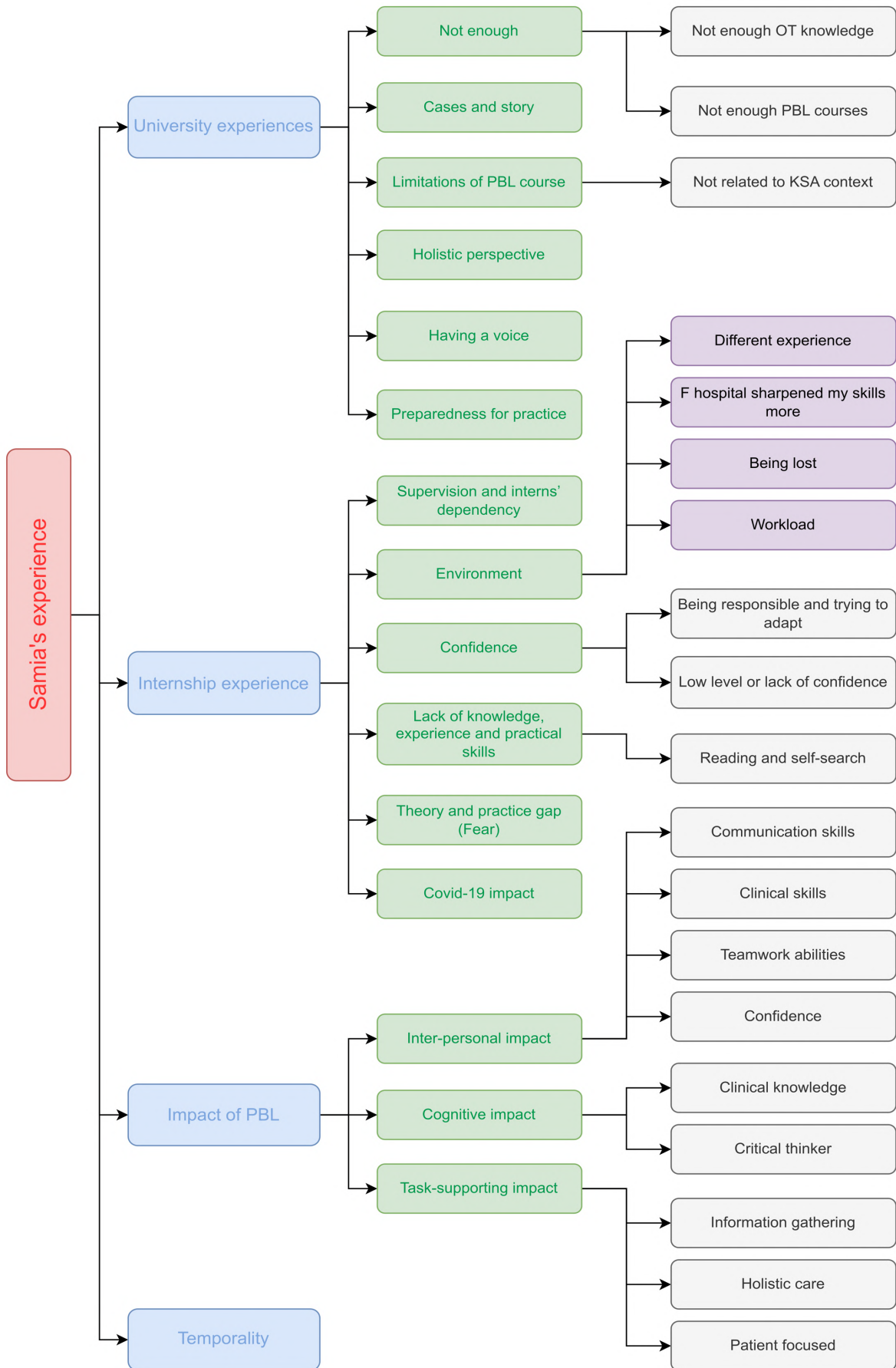
component of the thesis, and one that featured strongly in individual case studies, where conception of the self with it coming into being through social interaction with others (Smith et al.2009). This can be explained when OT interns face major transformations in their life, the relationship between self and the other increases and may facilitate or impede the development of individuals through his/her transition as occurred in this study. Thus, I maintain, whatever the individual's report on his experience, it must be taken as his interpretation of the reality he/she lived or is currently experiencing.

6.1 Samia's narrative

Samia studied OT in one of Riyadh's universities. Her experience of PBL was limited to two OT modules and she had some clinical training and placement experience before she started her internship. She was eight months into the internship programme and had been placed at two different hospitals as an internship student. At the time of the interview, she was in her second internship period and had covered many areas during her internships, such as neurology, orthopaedics, acute, outpatient, intensive rehabilitation and burns.

Samia did not overlook the influence of her university experience before the internship period and its direct impact on her. She outlined some of the enablers and challenges that she had faced, as well as the impact of PBL on her practice. She expressed feelings of uncertainty, as she only remembered one of her PBL courses at the beginning of her interview, although she remembered another after the third question. Themes from Samia's narrative are presented in Figure 6.

Figure 6: Samia's themes



Samia's themes

Samia's responses have been divided into four main themes. The first theme, "university experiences", is related to the time before internship that Samia mentioned during the interview. Subthemes here focused on her perceived lack of knowledge about the university programme, her limited recognition or understanding of the PBL course at university, explaining how PBL encouraged her to take a holistic perspective, describing how she believed she was not heard or that her views were not particularly valued until she did the PBL course, and her preparedness for practice. The second theme, categorized as the "internship experience", explored Samia's experience of internship and had six subthemes: supervision and interns' dependency, environment, confidence, knowledge and skills, fear and Covid impact. The third theme, "impact of PBL", linked to the first and second themes and included the subthemes of inter-personal impact, cognitive impact and task-supporting impact. Finally, the "temporality" theme touched upon her experience as she realized an improvement with time. All these will be discussed using Samia's words where possible (see Figure 6).

6.1.1 University experiences

This theme represents the time before internship to which Samia referred during the interview. It has six subthemes e.g., Samia voiced "Not enough" which emphasised a further sense of her university as not providing enough knowledge for the internship and not enough PBL courses, and "Cases and story" identified what PBL was with the terminology that she used.

6.1.1.1 Not enough

There appeared to be two critical strands to Samia's narrative within this subtheme, focused on feelings of not having enough OT knowledge and practice and feeling that there were not enough PBL courses in the university programme.

Samia felt that the PBL component was context-specific: if, for instance, if it was related to hand injuries, students did not learn about other conditions. Therefore, she mentioned many times that lots of things were "*missing*" from the OT programme (L:207), with insufficient lectures about the hand, the brain or mental health, and the OT programme was "limited" (L:210) to neurology and orthopaedic and was "*not very deep*" (L:211). A possible explanation for this is that PBL focuses on a context and a particular problem (Savery 2015), so it not possible to consider every condition when using a PBL approach.

However, there was a feeling of not having enough OT knowledge, as she never took a course about "palliative care or oncology" (L:208), and most of the medical terms were studied in her preparatory year, not in the OT programme:

"... I mean, all of them are medical terms, all of these I remember from the preparatory year, **ah**, we *didn't* take it [mean in OT programme]" (L:204- 217)

Consequently, Samia felt that OT programme needed to provide a review of the basic knowledge and cover the basic areas of OT in the last three months of the programme, such as "how to apply assessment" (L:404), which would enhance her knowledge and experience. This was demonstrated in the quote below:

"I feel as if the last three months of [*hesitating*], of [*hesitating*] the year, become training or preparation for the students themselves on how to manage the internship – they come back and review the basics..." (L:402, 207)

Additionally, Samia felt that there were not enough PBL courses in her university. She described most of the OT course as traditional "*teaching*" (L:217) [not PBL or practical]. She did not cover burns cases in PBL, and "the basic courses" (L:321) like neurology and orthopaedic were not PBL-based. Thus, she believed internship challenges existed because PBL courses were not applied in all modules, as PBL would keep her more focused on practical knowledge and skill.

"... I feel [hesitating] the challenges exist because there was not PBL in all courses, they were not present or applied" (L:385-386)

6.1.1.2 Case and story

This sub-theme defined PBL and the terminology that Samia used. It appeared that the term 'PBL' was not used at Samia's university, as she asked for an explanation of this term at the beginning of her interview. Samia's description of the PBL course was also interesting: she used different terminology, such as a three-week "case discussion" (L:40) and a three-week "story" (L:39). Indeed, when Samia was initially asked about her experience of PBL, she was unable to remember the topics covered in the PBL course: "I don't remember well" (L:64). This may indicate that PBL was not well activated at the university, or that the university did not explain to students the purpose of the PBL courses and how to benefit from them.

6.1.1.3 Limitations of PBL courses

Samia expressed a sense of dissatisfaction with some limits of the PBL courses she had studied. Samia thought PBL did not suit SA, as she felt that some PBL courses were "inapplicable" (L:330) in the Saudi context due to the differences in cultures between the PBL cases presented during the university period (taken from foreign universities), and because some services and procedures are not applied in Saudi hospitals. This might indicate that students and teachers pursuing constructivist pedagogies such as PBL as an end in themselves, thus; losing sight of the context and purpose of PBL which may impact students' practice (Kemp 2011).

6.1.1.4 Holistic perspective

Samia expressed a positive feeling regarding some aspects of the PBL courses, including finding "what helps the cases" (L:41) and paying attention to things that she might not otherwise have considered, such as the patients (cases) and "caregiver" (L:42) interaction, how "the education" (L:69) was given and the "psychological aspect" (L:70).

Thus, PBL encouraged her to take a holistic perspective and not just think about medical problems, as it looked at patient function (cases) and the problems before and after treatment:

"I wasn't thinking about other aspects [of patient or cases] until after these courses" (L:86-87)

"... we saw ... the previous level of function, and how it affected her, how she received the intervention and what problems she had, the complications in the hospital and after she went home, and the problems for her family" (L:187-190)

Thus, Samia argued that the drawback of the PBL course was that it did not give her a wide knowledge base of different conditions, but that it was beneficial in encouraging holistic practice (Wormley et al. 2019). Her solution seems to be more PBL scenarios on a range of conditions, as she felt that it would be better if PBL courses increased in the important modules, such as neurology and orthopaedics, or were applied in all modules, and that PBL courses for burns and hands would definitely change her experience for the better.

"... I feel it would be better if it existed [PBL]" (L:394-395)

6.1.1.5 Having a voice

This sub-theme talks about the benefits of PBL courses according to Samia and described how she felt she was heard in the PBL part of the programme.

Samia felt that she was not heard or that her views were not particularly valued until she did the PBL course. This feeling of being 'heard' in the PBL course led her to discuss "what is right and what is wrong" (L:40) from her perspective. This indicates that being heard as a student might be something that she is not used to in a SA context. Therefore, feeling 'heard' gave Samia the freedom to express her opinions and the ability to discuss issues from her perspective, with respect for the opinions of other students.

Furthermore, Samia's repeated statement "*was different*" (L:198) emphasized a further sense of being heard when she described that PBL allowed everyone in the group to express their viewpoints, even if they are different. She mentioned that the PBL course gave her new ideas, and her feeling was of complete expansion of knowledge on PBL cases:

"... my answer was different from someone else's [in PBL], my view was different from someone else's, it gave me new ideas, everyone states their point of view, so I have a complete expansion of this case..." (L:197-200)

6.1.1.6 Preparedness for practice

Although Samia described that the PBL course had improved her transition experience and felt that it prepared her for practice in her internship period, she also expressed a feeling of dissatisfaction, she felt that the OT programme in general did not prepare her for practice, as it only gave her "the basics" (L:212) knowledge and was not related to "*specialty*" (L:218) or "the practice itself" (L:219). However, even more PBL on the OT programme wouldn't have necessarily helped her gain more knowledge about conditions, as PBL focuses more on skill acquisition rather than knowledge acquisition (Whitcombe 2013b). Therefore, Samia felt that the OT programme did not cover all the things she needed to know when she was in the hospital. This was demonstrated in the quote below:

"... when I went to the hospital, I recognized that our specialization [OT] is branched, involving many aspects that I do not know about it ... I didn't feel it covered all specialties..." (L:219- 224)

6.1.2 Internship experience

This theme described Samia's experience during the internship period, and was divided into seven subthemes: supervision and interns' dependency, environment, confidence, lack of knowledge, experience and practical skills, theory and practice gap (fear) and the impact of Covid. Those subthemes explored Samia's experience in her place of practice, enabling factors that she had faced during her transition to practice, and barriers that influenced her experience during internship.

6.1.2.1 Supervision and interns' dependency

Samia mentioned many times that her supervisors (preceptors) helped with her transition experience. There was a sense of support, with Samia saying that her supervisors "were there and would correct me" (L:268) if she did something wrong during the internship. Moreover, supervision helped her to change things that she did wrong in practice, applying "assessments" (L:271) that she did not know, "explaining" (L:344) to her and "discussing" (L:344) whether she was doing things right or wrong, giving her "feedback" (L:345) and helping to "correct or amend the knowledge" (L:348), which therefore "helps a lot" (L:345).

Samia described her supervisor's help by saying "I felt that this made a lot of difference to me" (L:349), especially when discussing cases or interventions. Additionally, this feeling of support linked to how Samia managed challenges she faced during her internship:

"... things I don't know, I try to ask, even if the preceptor is not responsible for me now..." (L:377- 378)

In contrast, Samia also faced supervision issues, where there was not enough supervision and preceptors' perspectives differed. This led to feelings of negative competition, where lack of adequate supervision led to many interns being placed with one supervisor, leading to the supervisor "comparing" (L:366) the interns. Moreover,

feelings of control were associated with supervision, where she "cannot do anything without the supervisor" (L:169). Thus, those supervision issues led Samia to develop a sense of interns' dependency, where one intern depends on another to help the supervisor with the cases, and she could not change this because she was controlled by her supervisor:

"... sometimes when there is more than [*hesitating*] one intern on one case, each one depends on the other..." (L:366-368)

6.1.2.2 Environment

This subtheme is related to Samia's experience in her place of practice and the environmental factors experienced during her transition.

Different experiences

During the internship training, Samia practised in two different hospitals, F and N. While both hospitals provided good internship practice, Samia's experience was different in each hospital, as they had different "structures" (L:126) and policies. Samia also described her view of differentiation as "a big difference" (L:148), stating that in each hospital, she experienced different times for seeing patients, as well as differences in "following up patient progress" (L:155), "*your work*" (L:156) and "interventions" (L:156). Therefore, moving was challenging, especially when moving from one OT setting to another.

Hospital F 'sharpened my skills more'

There was a feeling of supporting and improvement emerged from Samia's experience regarding the hospital F environment. She felt that hospital F was more supportive, as it covered the required internship knowledge and had a clear internship student "schedule" (L:145), "plan" (L:144) and "structure" (L:135) from the beginning. She felt that in hospital F, her "skills" (L:171), "dealing with patients" (L:172), "communication" (L:172) and "problem-solving" (L:172) all improved; thus, Samia felt that hospital F "sharpened my

skills more" (L:177). This indicates the importance of the organization in the practice environment and how the responsible organization's concern for interns could be reflected in the interns' transition experience. Consequently, at the end of the interview, Samia stated that hospital F was:

" ... the *best place [hesitating]* an environment for internship students, in terms of teaching or in terms of training... " (L:420-423)

Samia also stated that the internship programme itself at hospital F helped with her transition, as it covered the interns' needs from their own viewpoint. It provided a mandatory "two lectures a week" (L:131), which covered topics that interns asked about from "the viewpoint of interns" (L:134). This sense of attention from the hospital environment demonstrates the importance of listening or paying attention to interns' needs in the working environment. Indeed, there was a need for "*a clear programme structure*" (L:415) in hospital N, "*reducing the number of interns*" (L:414) and "*focusing on those who are present*" (L:415), whereas these issues had already been addressed for interns in hospital F.

Being lost

Samia expressed a sense of being lost in hospital F, as she did not know the environment of the internship evaluation criteria. This was not the case in hospital N, because she was more familiar with the place; thus she "*knew the environment*" (L:161), "*knew the hospital*" (L:162), and knew most of the therapists; this helped with her transition and adaptation to her internship. Samia's feeling of being lost in hospital F is considered to be an important experience, especially at beginning of her practice at each site, and the need for things to be covered in the internship programme, as mentioned earlier, might have helped Samia's experience.

"*I felt that [hesitating], when I was placed into hospital F, I felt that I was a little lost*". (L:159-160)

"I started in the Main Hospital [N], but I was not lost..." (L:160-161)

Workload

Samia also considered the interns' workload to be challenging, particularly in hospital N, where some supervisors' expectations were very high: "all work" (L:165) was on her from the second week, and there were numerous patients to be covered. This feeling of excessive workload had a real impact on Samia's experience, as some supervisors left her on her own from the "second week" (L:165) to cover many patients at same time, which might lead to many challenges such as fear of practice, low confidence and supervision issues:

"... even if they [preceptors] are there, the whole workload remains on you..."

(L:170-171)

"... they put pressure on interns, there's a lot of work, a lot of patients..." (L:422)

All of the above indicate that the internship sites represented an important factor that influenced Samia's experience. She had different experiences in each hospital and each setting, and the internship programme itself influenced her transition. Samia described her experiences of being lost in hospital F but not in hospital N based on her prior knowledge of the environment, hospital structure and internship evaluation criteria. Finally, the workload in each environment impacted Samia's experience and led to different challenges.

6.1.2.3 Confidence

It was clear from Samia's experience that being confident during the internship programme helped her transition. However, there was a feeling of inferiority in Samia's level of confidence (low level or lack of confidence), particularly at the beginning of her internship. She described this as "not doing anything without the preceptor" (L:169) or not being able to answer patient's questions. However, trying to adapt and being responsible for patients during the internship period helped Samia, as it changed her view of herself:

"... when someone gives you this responsibility, it changes your view of yourself, ... I felt that [hesitating] my confidence increased when I became responsible for patients" (L:356- 358)

This can be linked to Samia's low level of confidence at the beginning of her internship, and her feeling of responsibility for patients raised her confidence and reduced her sense of inferiority during the transition. This changed her view of herself, increased her confidence and facilitated her transition experience. Additionally, this feeling of being more confident would have been enhanced, from Samia's viewpoint, if the university "cover the practice in the last three months" (L:408) of studying, so that when she moved to practice, she would have previous experience, and thus "more confidence" (L:409) when applying assessments or dealing with patients in the internship period.

6.1.2.4 Lack of knowledge, experience and practical skills

During her internship, Samia faced challenges regarding her lack of knowledge, experience and practical skills. This lack of knowledge about the OT "specialty" (L:220) and certain "assessments" (L:374) affected Samia's transition and led to a sense of uncertainty and lack of confidence, particularly at the beginning of her internship. This indicates the importance of the knowledge provided by the university to students, which can affect the student's transition experience during practice. Samia felt that she lacked certain knowledge related to specific settings during her internship, such as what assessment she could apply in "burns" (L:299), or:

"... *I never knew* about the wound care, **ah**, nor about bandaging, nor about materials that exist, even silicon..." (L:300-301)

Furthermore, feelings of dissatisfaction were correlated with Samia's level of knowledge, which she described as "*very bad*" (L:220) at the beginning of her internship. Therefore, increasing knowledge was an important factor from Samia's perspective, and helped her during her internship. This was achieved through "reading articles" (L:266), "studying" (L:264) files at hospitals, linking knowledge in internship and looking at up-to-date "interventions" (L:341) and knowledge. Thus, Samia's may have acquired some of these

skills from the PBL component of the course, and independently searching for information and interventions helped Samia to increase her level of knowledge:

" ... knowledge will not come to you unless you search for it... " (L:129-130)

Samia's feeling that she lacked skills was present in her narrative: she was unable to "try everything" (L:251) due to her limited skills in "applied assessments" (L:255) and she felt that she was "not accustomed to applying" (L:252) her skills. However, her skills improved during her internship due to environmental factors, as explained earlier, particularly in hospital F, which provided a good environment to enable her skills to develop.

This sense of lack of knowledge and skills might be related to Samia's experience before starting her internship period. Samia described feeling 'so bad' where she left university without experience with neurology or burns patients. This lack of previous experience might have led to the lack of knowledge and skills that she needed in her internship:

"... so [*hesitating*] it is so bad that I leave the university and have no experience with burns..." (L:114-117)

6.1.2.5 Theory and practice gap (Fear)

The gap between theory and practice was a challenge that Samia faced when she started her internship. She realized that OT is branched, and that there was a lot that she did not know about certain OT specialties. In fact, Samia could not apply what she had learned in university in real-life practice, and she did not know how to do an assessment with a real patient.

" as for the university and this specialty [OT], there is a huge gap, I mean when I started, I knew just that [*hesitating*] the degrees of burns ..." (L:114-117)

This led to fear of real-life practice, of applying skills learnt at university in hospital, and of doing something wrong. This fear might link to Samia's experience narrative, because practice in hospital with real patients was not previously available in her study period, or

as she described it, she felt unaccustomed to applying it in the hospital context with real patients in case she "did something wrong" (L:325):

"... there is fear of real-life assessments with real patients.... when I came to the hospital, I was sure that I would make mistakes, because I hadn't really done this before or applied it..." (L:251-259)

6.1.2.6 Covid impact

There was a feeling of resentment and untidiness in Samia's story because of Covid. She described her internship practice experience as a "mess" (L:107), as she had left her internship practice and then returned in response to the Covid situation. Samia expressed a feeling of loss of control regarding the Covid issue, as she "did not know how to control it" (L:381). Thus, Covid was a challenge that Samia faced during her internship practice:

"... because of Covid, I feel that when they stopped us and brought us back, this was all a challenge..." (L:370- 371)

The internship experience theme has explored Samia's experience with the enablers and barriers that she faced during her internship. Her narrative includes supervision factors, the environment (different experiences, hospital F, personal impact, internship programme, being lost, workload), confidence (being responsible, trying to adapt) knowledge and skills (reading, independent searching, lack of experience), fear (theory–practice gap), and the impact of Covid.

6.1.3 Impact of PBL during internship

This theme describes how PBL impacted Samia's experience. The PBL course had a clear impact on Samia's transitional experience during the internship period, which was divided into interpersonal impact (communication skills, clinical skills, teamwork abilities and confidence), cognitive impact (clinical knowledge and critical thinking) and task-supporting impact (information gathering, holistic care, patient-focused care, improved transition and preparedness for practice).

6.1.3.1 Interpersonal impact

Samia referred to the benefits of the PBL course in helping her to improve the communication skills that she needed during her internship. This was associated with Samia's transition: she talked about her communication with the preceptor, where "asking" (L:277) and "answering" (L:278) questions with her preceptor about the cases led her to know the "right answer" (L:279). She felt that this was "the most appropriate method" (L:279) to understand the cases, and resembled what she had done in the PBL course. Moreover, she felt an improvement in her ability when listening to "many parties" (L:203) that related to the patient and discussing cases with doctors and therapists in the hospital weekly meetings. This improvement in communication was gained from the PBL course and influenced her transition; she acknowledged that:

" ... I felt that it helped *me* in the end [PBL], that *I could discuss* my cases... with many people...' (L:237- 238)

While Samia thought that the clinical skills learnt in the PBL course had influenced her practice "with time" (L:290), she stated that she was able to apply these clinical skills into the hospital context and felt that different clinical skills helped her in each of the hospital areas. In fact, she had no doubt that PBL would keep her "more focused on practice skills" (L:393) if applied in all courses.

The PBL course also influenced Samia's experiences through improving her teamworking abilities during her internship. Samia described this as "the same idea [of PBL], but in the hospital" (L:241), enabling her to think about how other teams (e.g., PT) might work on

the same case. Therefore, her learning from the PBL course (interdisciplinary module) influenced her experiences in the hospital.

Improved confidence was another impact of the PBL courses. Samia faced challenges, as mentioned earlier, with her low level of confidence. However, through trying to apply the skills learnt in the PBL course during her internship, her confidence increased, especially in answering patients' questions:

"... I feel now that if the patient asks me a question, I will be able to answer it... it increases my confidence..." (L:291- 293)

6.1.3.2 Cognitive impact

Samia acknowledged that the clinical knowledge gained from the PBL course has influenced her practice "with time" (L:290). She also talked about her ability to apply this clinical knowledge in the hospital context, and she felt that different aspects of clinical knowledge helped her in each of the hospital areas. Thus, she was sure that the PBL course would keep her more focused on practice knowledge if applied in all courses.

Another cognitive impact of the PBL course on Samia's internship experience was that it encouraged critical thinking. Samia clarified that before taking the PBL course, her thoughts about treating cases were different. She described her thinking as "a little restricted" (L:87) to the case and intervention method. However, the PBL course opened up her thinking and led her to consider other aspects and pay attention to things that she might not previously have considered, such as "family" (L:79), "education" (L:80) or "group intervention" (L:81). This sense of breadth and critical thinking facilitated her identification of things that "caused the problem" (L:204) and "the effect of the problem" (L:205), therefore increasing her "critical thinking" (L:293).

" ... I didn't think about other aspects until after these two modules [PBL]. I mean, there are things that I didn't notice before..." (L:86- 88)

This indicates Samia's critical thinking has improved through PBL, where small group discussions are used to address specific OT issues, generating information and dialogue,

and finding solutions to problem-based scenarios beyond private opinions and promotes broader understanding. Thus, the PBL courses led to a significant improvement in her critical thinking, as she became more engaged in critical analysis and questioning of actions, rather than relying solely on their understanding (Nallen et al. 2018).

6.1.3.3 Task-supporting impact

As mentioned above, Samia considered increasing knowledge to be important, as it helped her during her internship through reading articles. Thus, during the PBL modules, she honed her skills in searching for knowledge and knowing how to find information. She felt that the PBL course improved her information-gathering skills:

"... I search for all these aspects..." (L:206)

"... I read [*hesitating*] the case before it came: I mean, if I saw it, I would take the review card..." (L:280- 282)

Samia acknowledged becoming a holistic and patient-focused care provider when she moved to practice as a result of the PBL course. Before PBL, Samia felt inferior when thinking about other aspects of patients, such as "family" (L:79). However, she felt that PBL had encouraged her to take a holistic perspective and not just think about medical problems. She thought about older people and how "family" (L:79) or "ADLs" (L:80) might affect their lives. Thus, she acknowledged that PBL enabled her to:

"... understand the case itself, trying to understand *aa* what the main problem is, ... and I search for all these aspects, see different aspects of patients themselves" (L:206- 207)

6.1.4 Temporality

This theme examines the time Samia needed to recognise her skills and knowledge improvement during her internship and the influence of the PBL course to her practice.

Initially, Samia lacked confidence because she did not feel that she knew enough or had enough knowledge and skills in the OT specialty, but in time, the skills gained through PBL helped her to overcome these challenges. Her acknowledgment that this happened "with time, not directly" (L:290) emphasized that skills and knowledge learnt in the PBL course had influenced her practice, but that it took time to apply these skills in a hospital context. Interestingly, the point in time when Samia realized the benefit of the PBL course was after two to three weeks, as she felt that her adaption improved with time and that she was familiar with OT areas after two weeks.

" ... two weeks I felt that everything was familiar, and everything was correct..."
(L:268- 270)

However, there was a sense of inconsistency in Samia's narrative, as she stated later that she needed a "long time" (L:390) to adapt to the challenges that she faced. This feeling of needing more time is supported by her earlier statement that "now" (L:291), meaning after eight months' experience, she would be able to "answer" (L:293) patients' questions: this seems to be the point in time when she realized that she had enough experience to be confident, had improved her knowledge and skills sufficiently to answer patients' questions and was able to take advantage of the benefits of PBL in her internship. Thus, the sense of time needed was clear in Samia's transition experience, as she felt that:

"... my skills were better there [*hospital F*]: I felt that even my way with patients was better, communication became better, problem solving was better..., *with time*..."
(L:171-174)

This also indicates that as an OT intern, Samia needed time to get used to the current practice, and to apply the skills and previous experiences learned at the university in the context of the current internship period.

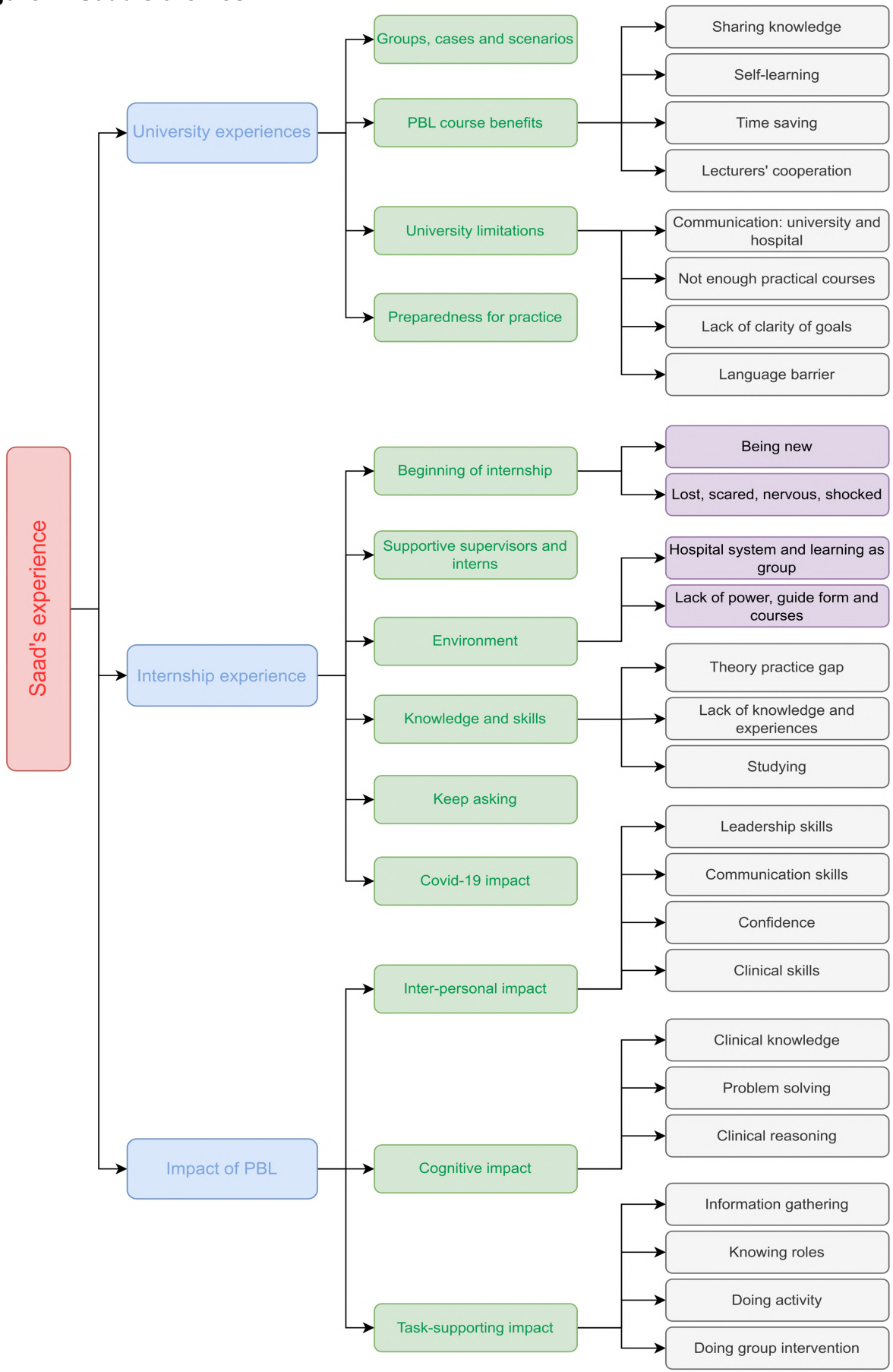
6.2 Saad's narrative

Saad is male, with ten months' experience in internship. He had studied OT at a university in Riyadh. The course structure in his university was a combination of traditional teaching methods and PBL, but his experience of PBL was limited to certain OT modules. Saad had previous practice course experience before he started his internship, such as fieldwork, which is mandatory and involves spending hours physically once a week for the last three terms in a setting such as the hospital or the clinic, but he explained that this entailed only observation. Although Saad acknowledged that his previous fieldwork experience had helped with his transition (e.g., his time in the burns unit), he highlighted that the supervisor during his fieldwork study focused more on interns than on fieldwork students.

At the beginning of his interview, Saad stated that he had ten months' experience in the internship program, with placements at three different hospitals. However, during his interview, Saad confirmed that he had eight months' experience in hospital N and two months in hospital F, without mentioning the third hospital. At the time of the interview, Saad was on his second internship placement and had covered many areas, such as outpatient adult neurology, acute, orthopaedic, paediatric, inpatient spinal cord and hand therapy.

At the beginning of the interview, Saad acknowledged that the PBL course was a basic module at his university. However, there was a feeling of uncertainty, as he had forgotten what he did in PBL, and he was not able to remember the PBL technique or the modules of the PBL course. Nevertheless, he later remembered the group intervention module (one of the PBL modules at his university). Saad tried to remember the second PBL module and called it 'group intervention'; however, he did not mention or describe the topics covered in the two PBL modules. Themes from Saad's narrative are presented in Figure 7.

Figure 7: Saad's themes



Saad's themes

There are three main themes and thirteen associated sub-themes in Saad's narrative. These themes and sub-themes will be discussed using Saad's words where possible (see Figure 7).

6.2.1 University experiences

This theme represents the time before internship that Saad referred to during his interview. It has four subthemes: groups, cases and scenarios; PBL course benefits; university limitations; and preparedness for practice. This theme had multiple strands around identifying and knowing what PBL was, along with the terminology that Saad used to describe the PBL modules, the benefits of PBL courses, and how lecturers were very supportive. This theme also explored the limitations of the university OT programme from Saad's opinion, and whether he felt that this programme had prepared him for practice.

6.2.1.1 Groups, cases and scenarios

While Saad acknowledged that the PBL course was a basic module in the OT university programme, there was a feeling of not using the term 'PBL' associated with Saad's narrative, as he described the PBL course as "*groups*" (L:36), "*groups of four*" (L:59), "*cases*" (L:37), "*scenarios*" (L:38), and "*finishing the scenario*" (L:60). Therefore, this difference in the descriptions in Saad's narrative may indicate that students and lecturers do not use the term 'PBL' during the university period (that is, that PBL is not made explicit), or that there are relatively few PBL modules compared to the traditional modules. Consequently, as mentioned earlier, Saad could not remember the name of the PBL course or the method of PBL teaching.

6.2.1.2 PBL course benefits

There was a feeling of being alone in traditional teaching methods, with Saad recognizing that he did not like to learn alone. Saad acknowledged that lecturers were very supportive during the university period, and emphasised a positive feeling of cooperation in PBL, "*we all explained in the explanation*" (L:73), a feeling of sharing knowledge and a sense

of "opposition" (L:330) to opinions during PBL. This helped Saad to correct his understanding and get to the right knowledge: he felt that this could not be achieved using traditional teaching methods:

"... I am a person who does not know how to browse things by myself, **good**, I must have someone with me" (L:320-321).

"...we finally get to the right [knowledge], unlike when I'm alone" (L:331).

Another positive outcome from PBL was that it helped Saad with "self-learning" (L:151) and saved his time during studying, as the PBL method enabled him to "find many things" (L:79) in "the same class [session]" (L:77). This demonstrates Saad's feelings towards PBL as a teaching method that was meaningful for him, and his feeling that he would not forget the things that he had done in the PBL course:

"... what you take from [*hesitating*] the group stays with you, or frankly *you* don't forget it. ... opposite of what the doctor explains [mean lecturer in traditional method]" (L:81-82)

6.2.1.3 University limitations

Saad mentioned four limitations that had arisen during his university study. First, he acknowledged that there was a lack of "communication between university and hospital" (L:163), which affected his ability to transition to practice in fieldwork or internship. This could be explained where OT students needed to prepare the necessary arrangements before going to practice environment, such as choosing times, places, setting and selecting supervisors. Considering this, Saad called for "more communication between university and hospital" (L:376) to facilitate the transition to practice and to prepare the necessary arrangements for OT students in the practice environment.

Second, Saad expressed a feeling of dissatisfaction in his comment that there was a lack of practical courses during the university period. His use of the term "*observation*" (L:167)

emphasised a further sense of inability to apply the required practical skills in fieldwork: therefore, he proposed that more clinical courses should be provided during university study:

"... suggestions for the university to increase the clinical practice..." (L:372-373)

Third, there was a feeling of lack of clarity of goals during the university period, when Saad called for the need for set "goals" (L:376) to be achieved by the end of each term of the course. This feature of defining the goals to be achieved in each course, as will be clarified later, appears to be one of the things that Saad learned in hospital F during his internship, which had a great impact on his transition.

Finally, Saad expressed a feeling of inferiority when he described himself as facing a language barrier during studying, which sometimes led him to incorrect understandings of certain aspects. This might also affect Saad's internship; however, he acknowledged that studying in groups during PBL helped to overcome this:

"... this language is not my mother language, right, sometimes I understand things wrongly ... if you understand it wrongly, two people tell you 'no, it's wrong', and correct it for you..." (L:326-329)

6.2.1.4 Preparedness for practice

Although Saad emphasised that he did not feel that the university had prepared him for practice, he did mention that some courses outside the OT curriculum had provided some such preparation, such as how to conduct an "interview" (L:179), which he needed during admission to the internship program. In fact, there was a sense of inconsistency about whether the PBL course had prepared him for practice. He said "I don't expect much" (L:190), emphasising a further sense that the PBL course had not prepared him for practice. However, he acknowledged that PBL had helped him a great deal as a teaching method, which had transferred to his practice experience, as demonstrated in the quote below:

" ... If it was on *groups* [meaning PBL], it helped me a lot, the method of explanation instead of being from the doctor to the students, all the students are together... communication skills, communication [*hesitating*] how do we reach a solution to a specific problem, ... clinical reasoning, ... almost the leadership..." (L:197-203)

The overall sense of Saad's experiences during his university period was focused on how he described the PBL course, his acknowledgment of the benefits of the PBL course during his studies and how his lecturers had been very supportive during this time by encouraged cooperation, knowledge sharing, correct his understanding and obtain the correct knowledge. Saad also referred to some limitations faced during his studies; finally, he explained his feelings regarding his preparedness for practice.

6.2.2 Internship experience

This theme describes Saad's experience during the internship period. His experience was divided into six subthemes: beginning of internship (being new, lost, scared, nervous, and shocked), supportive supervisors and interns, environment, knowledge and skills, keep asking and Covid impact. Those subthemes explored Saad's experience at the site of his practice, including enablers and barriers that influenced his internship.

6.2.2.1 Beginning of internship

This subtheme talks about Saad's experience early in his internship, how he described his different feelings and the general description of his internship experience.

Being new (proving himself)

Saad felt that his first month of practice was the "most difficult month" (L:227) in his experience. He described internship as "something new" (L:216) where "everything was new" (L:339) and challenging. Indeed, there was a feeling that he had to "prove myself" (L:223) in OT areas at the beginning of his transition. This may be because the environment was new for Saad, and proving oneself is important for new students to give an initial impression that he is a trustworthy student or to obtain a high evaluation in internship. This may explain Saad's description that the first month was difficult, as he needed to deal with the new environment and to prove himself as a good and qualified OT intern in that environment.

Lost, scared, nervous, shocked

Saad also expressed negative mixed feelings when he described that he felt 'lost' when he first transitioned to internship and in the first month, he felt 'scared', 'nervous' and 'shocked'. These negative feelings may indicate the extent of the challenges Saad faced when he moved into internship, particularly given that he started his internship during the

COVID pandemic, needed to deal with new environment, and felt that he had to prove himself in that environment:

"Frankly, I mean one word is *lost* – I was *lost*, frankly in the first two weeks, from being *lost* to *scared* to *nervous*... at first I was *lost*, the first two weeks, until I'd been there a month... there was a *shock*" (L:215-229)

Although Saad described his experience in general as "OK" (L:122) at the beginning of the interview, there was a sense of dissatisfaction when he described the internship as "opposite" (L:339) to what he had studied. Moreover, while his experiences at hospitals F and N were "different" (L:139), he did not feel that "two months" (L:126) were enough for each area or settings in those hospitals, and he emphasised that he needed "six months" (L:127) to feel "OK [satisfied]" (L:128). This may be because the environment was new to Saad, or his internship experiences were different from his studies, and he thus needed longer to feel fully immersed in those internship areas.

6.2.2.2 Supportive supervisors and interns

Saad felt supported by his supervisors and acknowledged that they had helped him to adapt during internship by allowing him to observe for the first two weeks:

"the supervisors were good; I mean all the supervisors I had when I started in each area: gave me two weeks of observation at the beginning of each area..." (L:136-137)

Moreover, Saad's supervisors supported him by keeping things easy for him and explaining that it is normal to make mistakes:

" ... the supervisor... he made things very easy, he said this thing is very normal, it's normal that you make a mistake..." (L:218-220)

Saad also emphasised that his supervisors were one of the factors that enabled him during his internship period. Indeed, Saad's narration expressed a feeling of guidance from his supervisors during his internship:

" ... there is guidance from your supervisors: they tell you, for example, to look at certain things that are very important to know..." (L:313-314)

Saad also expressed a sense of support from the other interns, saying that "OT interns" and "other interns" (L:307) helped him during his internship and improved his experience. Moreover, hospital F focused more on interns, with an "intern committee" (L:407) and more help from supervisors, who had a "checklist" (L:407) to follow up interns.

6.2.2.3 Environment

This subtheme is related to Saad's experience in the place of practice and how environmental factors influenced his transition. Saad acknowledged several enabling environmental factors, such as knowing the hospital system, learning as a group, the intern committee and the other interns. The environmental challenges that Saad faced were lack of power, the need for guidance forms and the need for more clinical courses in hospital.

Hospital system and learning as a group

Saad explained that he found it easier to adapt to the environment if he knew the "hospital system" (L:135). He said that this was the 'only thing' that helped him in his transition:

"... we knew the system; it was the only thing that could make everything easy for us..." (225-226)

Furthermore, "learning as a group" (L:319) during the internship helped Saad. This might have been due to the PBL teaching method used in university, as Saad emphasised a positive feeling of cooperation and sharing knowledge in PBL. Thus, he acknowledged that hospital F applied PBL cases for interns, which helped him during his transition.

Lack of power, guide form and courses

Saad expressed a feeling of lack of power, saying that he did not feel like a therapist and that many things (e.g., doing courses) were beyond the powers available to interns. He also emphasised that he had given recommendations to the hospital but acknowledged

that most of them were not accepted because of the power imbalance between therapists and interns:

"... as an intern student [*hesitating*] I don't have those powers that I can, you know, implement things..." (L:294-295)

Saad also explained that he found that hospital N had good therapists, but that its "lack of guide forms" (L:417) was a negative environmental experience for him. He emphasised the need for a "list" (L:168) in each hospital area to cover the things needed by OT interns. He also called for more "clinical courses" (L:398) in hospitals (three hours/week).

These positive and negative experiences were used to explore the environmental subtheme that Saad acknowledged during his internship.

6.2.2.4 Knowledge and skills

During his internship, Saad faced challenges regarding lack of experience and knowledge. He felt that he had a gap between theory and practice, which affected him during his transition. He explained that as were things he studied theoretically, but "not be applied in the hospital" (L:340), as they needed another method of application. He also acknowledged this gap between theory and practice, as he felt that he only had the basic "theoretical knowledge" (L:173) when he started his internship. Interestingly, Saad felt that he lacked knowledge at the beginning of his internship, even though most of his course was delivered through traditional methods like lecturing:

"... knowledge is one of the needs..." (L:353).

Although Saad illustrated that he needed time to gain experience, he expressed a sense of inferiority when he referred to his feelings regarding his lack of "experience" (L:174, 343) in his internship. He thus considered it important to increase both knowledge and experience and doing so had helped him during his internship. This was achieved through "looking for knowledge" (L:313) and "studying without pressure" (L:310).

6.2.2.5 Keeping asking questions

One thing that enabled Saad during his internship was that he kept asking questions. Saad felt that continually "asking" (L:356) and "questions between interns" (L:309) helped him during his internship. This may be one of the advantages of moving from PBL to the practice environment, as he felt "*confident*" (L:359) when asking questions. He also acknowledged that asking questions meant that his supervisors could help him with things that he was unsure about:

"... these questions keep him [supervisor] focused on you..." (L:361-362)

6.2.2.6 Covid impact

A feeling of resentment appeared in the Saad's narrative regarding the impact of Covid. Saad described feeling the impact of Covid "*very much*" (L:228) in his internship period. Moreover, Saad acknowledged Covid's impact on his lectures in hospital:

"... they give you lectures, but because of Corona [Covid], they do not apply them..." (L:284-285)

The internship experience theme explored Saad's experience with the enablers and barriers that he faced during his internship. His narrative included beginning his internship (being new, lost, scared, nervous, and shocked), supportive supervisors and interns, the environment (the hospital system and learning as a group, lack of power, the guide form and courses), knowledge and skills (theory–practice gap, lack of knowledge and experiences, studying), keeping asking questions and the impact of Covid.

6.2.3 PBL Impact

This theme describes how PBL impacted Saad's internship experience. The PBL course had a very clear influence on Saad's transitional experience during the internship period. The impact was divided into inter-personal impact (leadership skills, communication skills, confidence and clinical skills), cognitive impact (clinical knowledge, problem solving and clinical reasoning) and task-supporting impact (information gathering, knowing roles, doing activity and doing group intervention).

6.2.3.1 Inter-personal impact

One of the distinguishing features of the impact of PBL during Saad's transition period was the feeling of developing leadership skills. Saad acknowledged that PBL allowed him to develop "leading skills" (L:90). In fact, he felt that PBL would help him to be a "leader" (L:97) when he went to hospital. Saad transferred this sense of leadership from PBL to the practical context, and it also had an impact on knowing how to be responsible in the "discussion" (L:88) sessions in hospital. Thus, the sense of leadership can be considered to be a distinguishing feature that impacted Saad's internship.

Saad also referred many times to the benefits of the PBL course for in his communication skills during his internship, as in his emphasis on "just communication" (L:260). Saad believed that PBL helped him to "talk well" (L:100) through the effect of his communication with staff, peers, nurse, OT and PT:

"... *[hesitating]* it affected possible in terms of communication, ... how do I communicate with those who are *[hesitating]* with me in the same department, with the other OTs, PTs, *[hesitating]* nurses, doctors, all these things – I mean the communication helped me very well ... helped me a lot" (L:235-240)

Another interpersonal impact of PBL on Saad's experience was a "positive effect" (L:245) on his clinical skills. He felt that the skills learnt in his PBL course had influenced his practice and that he was able to apply these skills in the hospital context. However, a contradiction arose when Saad stated that the PBL "did not" (L:91) affect his level of

confidence. He confirmed this sense of contradiction, as he admitted later in the interview that PBL "increased" (L:325) his confidence during his internship. A possible explanation for this is that at the beginning of the interview Saad highlighted his focus during the university period, but later reveals that the PBL skills he acquired positively impacted his confidence during his internship, suggesting a shift in his perspective.

All of the above indicate how the PBL inter-personal aspect influenced Saad's experiences during his internship. This was through improving his leadership skills and responsibility for discussion, communication skills, clinical skills and confidence.

6.2.3.2 Cognitive impact

This cognitive impact subthemes talked about Saad's clinical knowledge, problem solving, clinical reasoning and how PBL had impacted him. Saad expressed a feeling of not applying all that he had learnt in the PBL course in the hospital context; however, there was a sense of improvement when Saad acknowledged that the clinical knowledge he had gained in the PBL course had influenced his practice, but "without deep" (L:246) knowledge. What Saad means is extensive knowledge as the PBL course had only given him knowledge about some OT areas, and regardless, he expressed his satisfaction to apply this clinical knowledge gained from PBL in the hospital context, stating it has enhanced his skills during internship:

" ... [PBL] improved my knowledge..." (L:324)

Another cognitive effect that the PBL course had on Saad's experience during the internship was that it improved his problem-solving and clinical reasoning. Saad acknowledged that this impacted his transition:

" ... this helped me a lot.... problem solving, clinical reasoning helped me sometimes..." (L:199-202)

6.2.3.3 Task-supporting impact

The task-supporting subthemes referred to Saad's information-gathering, knowing his roles in the group, and participating in activities and group interventions.

Saad felt that PBL influenced his information-gathering during his internship. He explained that PBL enabled him to provide the "right answer" (L:88) and "more accurate answers" (L:89) than others, and to "take important notes" (L:101). Moreover, he described himself as being able to "take others' opinions" (L:101), which helped him during his transition.

Another effect of PBL was that it enabled him to know his "role in the group" (L:84). He explained that he had learnt from his PBL course whether he was a facilitator, the one who holds the debate, or the one offering opposing views. Moreover, Saad acknowledged that PBL taught him how to do the "whole activity" (L:87) in practice and how to do group interventions:

"... it taught me that afterwards, how can I [*hesitating*] make a group intervention, and frankly I am comfortable..." (L:155-156)

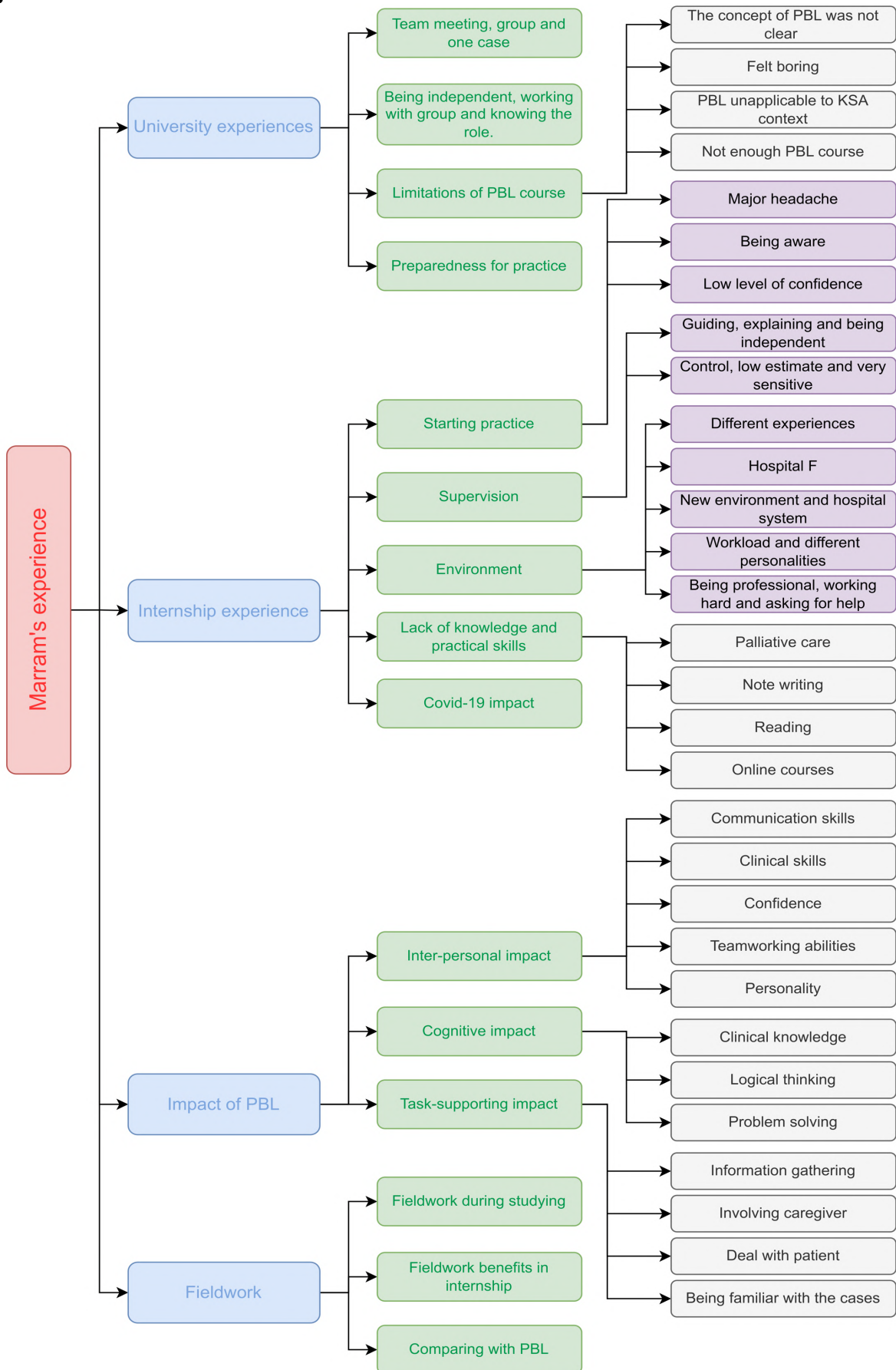
All of the above subthemes described Saad's feelings about how the PBL course had influenced his internship experience.

6.3 Marram's narrative

Marram studied OT at a university in Riyadh. Her experience of PBL was limited to two OT modules and there were more theory courses than practical in her university. However, Marram had some clinical training, fieldwork experience and summer training (at hospital N) before her internship. The fieldwork modules covered three terms and combined practice (70%) and theory (30%). Her fieldwork experience comprised a few hours in each module with visits to various settings, and she described her practice experience as observation and shadowing.

At the time of the interview, Marram had 9-10 months experience in the internship programme and had been placed at two different hospitals as an internship student (hospitals N and F). She was in her second internship placement, which covered many areas, such as orthopaedic, acute and outpatient adult care. At the beginning of her interview, Marram felt lost and confused, only remembering one PBL module in which she had taken cases such as Alzheimer's and arthritis patients. She was not able to recognize the other PBL module until the end of the first third of the interview, which covered orthopaedic and stroke cases. Themes from Marram's narrative are presented in Figure 8.

Figure 8: Marram's themes



Marram's themes

There are four themes and twelve associated subthemes in Marram's narrative. These themes and subthemes will be discussed using Marram's words where possible (see Figure 8).

6.3.1 University experiences

This theme represents the time before internship that Marram's referred during her interview. It has four subthemes: Team meetings, groups and one case; being independent; working with groups and knowing her role; limitations of PBL course and preparedness for practice.

6.3.1.1 Team meetings, groups and one case

This sub-theme defined PBL and the terminology Marram used. It appeared that the term 'PBL' was not used at university, as Marram described one of the PBL course as a "team meeting" (L:51), "group every week" (L:61), "one case covered over three weeks" (L:70). This was interesting, as Marram's use of different terminology suggests that she was not fully aware of the concept of PBL during her studies or it was not explained to her at university.

6.3.1.2 Being independent, working with groups and knowing her role

Marram expressed positive feelings about the benefits of PBL. She acknowledged that the PBL courses enhanced her ability to work with a group, "*not individually*" (L:67) and to know her role within the team and know other people's roles and how they could help:

" ... *you know what your role within this team is, ah, and at the same time, you know everyone else's role, and how it benefits your patient...*" (L:97-99)

Moreover, Marram talked about PBL helping with her "personality -wise" (L:205). This sense of personal influence might be explained by her feeling of being independent, as

she answered that the PBL course helped her to find information by herself and to be well-prepared: this, she made greater effort in the PBL courses compared to traditional teaching:

" ... there is a difference when *you* go searching for information to bring ..." (L:227)

" ... *I* have to prepare everything from A to Z: **yes**, it means that the student must make an effort to search and do part of the work..." (L:230-231)

Marram's positive feelings could be linked to the collective and co-operative learning approach required of PBL, where students need to work in groups, apply their knowledge from their independent studying (information gathering phase), and collaboration that helps them learn from each other (Davidson and Major 2014).

6.3.1.3 Limitations of PBL course

Marram acknowledged some limitations of the PBL courses. She expressed confusion, as the concept of PBL was not made clear at her university and she explained early in her interview that the course was not named PBL.

"... OK, honestly the concept of PBL isn't made clear in our university..." (L:195)

Marram described PBL as "*very boring*" (L:223), which emphasised a negative aspect of the way PBL was delivered. This might be because the PBL was delivered through many steps or that the cases or scenarios used were not real compared to what she found in practice:

"... OK, *the way of teaching* [mean PBL] *was very boring, honestly, what courses was?...* *very very boring...* interdisciplinary and interdisciplinary and group intervention..." (L:222-223)

"... but when *you* go to practice [not PBL] *you* will find real diseases..." (L:58-59)

Marram felt that some of the skills and knowledge learned in PBL courses were inapplicable in hospitals in the Saudi context. This sense of contradiction was evident when she referred to the hospital context as more flexible than what she had learned in PBL and mentioned that calling the police and visiting patients at home were not applicable in the Saudi context or in OT departments, although students were asked to cover this during the PBL course. Additionally, Marram expressed a sense of contradiction when she explained that the PBL cases were different from the reality, as she found that some PBL cases were not related to the Saudi context. There was also a sense that the PBL cases were not relevant to the reality of practice in SA, as they were taken from an overseas university, and that this might impact on her internship transition:

"... it was unapplicable because the reality is different..." (L:401-402)

"... from foreign university, but the cultural barrier, you know, excellent excellent, yes, these [hesitating] that they focused on these things in the cases, but in fact, there are other things that you focus on..." (L:280-283)

Furthermore, Marram expressed dissatisfaction towards her university, as some but not all courses were PBL based, and there were not "enough PBL staff" (L:518): for instance, the OT groups had "60 students" (L:519). Therefore, she felt that the university should apply more PBL courses and do so more effectively, and that it would be better if all courses were PBL based:

"... they apply PBL more, more effective way..." (L:538-539)

This could be explained by the fact that Marram's dedication to PBL courses led to self-knowledge discovery, effective preparation, and enhanced groupwork skills, surpassing traditional teaching methods by honed her ability to exchange information with others.

6.3.1.4 Preparedness for practice

Marram discussed her feelings of preparedness for practice regarding PBL courses in some areas. She described her preparedness where she could "discuss the case" (L:54) in hospital and identify the problem that another team needed to know. However, she also expressed dissatisfaction, as she felt that the PBL did not prepare her for practice and that the "skills" (L:348) learnt in the PBL course did not influence her practice. The possible explanation for this is that the cases themselves and the details of the cases were not applicable in the Saudi context.

Additionally, Marram conveyed a sense that she had not learned the required practical skills at university, or done OT assessments in her theory courses. She felt the OT programme in general did not prepare her for practice: "*no, not too much*" (L:238). Even before starting university, she was worried that the OT programme would not prepare her well in terms of practical skills:

"... / knew before / entered OT that they [university] wouldn't prepare you well for clinical practice..." (L:351-352)

This can be interpreted as she might have looked at the university curriculum and discovered that it has few clinical practice courses, or contacted former students who started the internship and got their impression of their readiness to practice.

This difference in Marram's feelings and experiences may be due to the different teaching methods used at her university. The PBL courses were useful in preparing for practice in some aspects, but in general, the OT programme did not prepare her for practice, since 85% of the programme was theory-based.

The overall sense of Marram's experiences before starting her internship was around how she described her PBL course, her acknowledgment of some benefits of the PBL course

during her studies and some of the limitations of the PBL. Marram also explained her preparedness for practice in terms of PBL courses and the OT programme.

6.3.2 Internship experience

This theme describes Marram's experience during her internship period. Her experience was divided into five subthemes: starting practice (major headache, being aware, confidence), supervision, environment, lack of knowledge and practical skills and the impact of Covid. These subthemes explored Marram's experience at her practice placement including enablers and barriers that influenced her internship experience.

6.3.2.1 Starting practice

This sub-theme talks about Marram's experience when she first moved to her internship.

'Major headache'

Marram started her internship during the COVID pandemic, attending for two days/week and for fewer hours than other therapists (as explained later). She described her first two weeks of internship as a "*major headache*" (L:310). This stress indicates the difficulties and challenges faced at this stage. These feelings might be because she had to deal with a new environment and new roles within an unfamiliar context. Her words "starting from zero" (L:340) further emphasised Marram's feelings when she began her internship, although after some experience, she felt that she was "close the gaps" (L:340).

Awareness

A feeling of awareness was evident in Marram's narrative. Marram believed that everyone should improve themselves by "development" (L:351), and by knowing "how to do interviews" (L:425) before starting their internship. This sense of awareness helped in her transition and was also associated with Marram's narrative during her internship, as she explained that she was aware that she was "still growing" in her specialty (L:513) in the internship period. Moreover, she acknowledged her awareness that the gap between theory and practice "cannot be covered 100%" (L:515) during her internship period. Thus, this sense of Marram's awareness may have a positive impact on her transition period by

estimating the challenges that would arise during her practice and trying to develop herself beforehand.

Low level of confidence

Marram's confidence was low, especially at the beginning of her internship. This was expressed in her inability to see patients alone. Moreover, Marram's lack of confidence was emphasised as she described herself facing some "situations" (L:213) at the start of her practice:

" *Look, to be honest*, you cannot ... see the patient as an intern, **aha**, and this situation may happen at the end of your rotation..." (L:175-176)

6.3.2.2 Supervision

Guiding, explaining and being independent

A sense of feeling supported by her supervisors was evident in Marram's transition narrative. They helped by giving her topics to read about – "some research, approaches and assessments that they use" (L:314) – and by facilitating "group discussion" (L:317) sessions and explaining Marram's "issues" (L:444) in practice. Marram also emphasised that her expert supervisor, who had "ten years' experience" (L:497), was particularly helpful during her internship. Therefore, she felt that her supervisors had impacted on her feelings of being independent or responsible for patients:

"... for example, if you continue with them [supervisors] for two months, it might be possible for half of the second month for you to be responsible for the [patients'] schedule or half of the schedule, depending on the supervisor. This means that you will become independent..."(L:176-178)

Control, low estimations and sensitivity

Marram acknowledged some supervision issues that had arisen during her internship. There was a sense of control at the beginning of training, as she described that her

supervisor said to her, "I do this, I do that, and [*hesitating*] you do it" (L:179). This led Marram to feel that her supervisor held a low estimation of her, and she described feeling as if she was "*just shadowing*" (L:184).

Moreover, Marram felt that some supervisors were "*very sensitive*" (L:187), as they did not allow her to see patients alone at the start of her internship. This may link to her sense of lack of independence, as she described her inability to see patients alone until "the end of your rotation" (L:179). This degree of control varied between supervisors, as Marram mentioned that some supervisors refused to be responsible for interns, which might impact interns' experience.

These positive and negative experiences illustrate the supervision subtheme that Marram acknowledged during her internship.

6.3.2.3 Environment

This subtheme is related to Marram's experience at her place of practice and how the environmental factors influenced her transition experience.

Different experiences

Marram's narrative conveyed a sense that experiences differed between settings. This was related to the departments within the hospital, as in the inpatient department, she was given a lot of different tasks. She explained that she was prescribing "assistive devices" (L:166), discussing cases with nurses and PTs and having "interdisciplinary team meetings" (L:268). In contrast, in the outpatient department, Marram described her experience as "running smoothly" (L:168), with four patients in the mornings and three in the afternoons, without the variety of tasks that she had been given in the inpatient department.

Hospital F

As mentioned above, Marram applied for internships in two different hospitals, F and N. However, she felt that she belonged more to hospital F and that its environment helped more, as she was treated as staff, not an intern. She described hospital F's internship programme as 'the best', as it provided an internship plan for students:

"... when they accept *you* [as an intern], ... *you* become like staff to them..."
(L:426- 437)

"... they have the *best best* internship plan for students..." (L:420)

A sense of support emerged from Marram's experience in the hospital F environment, as having an education programme improved her experience by enabling her to discuss cases with other OTs as she had done in her PBL courses:

"... they had an education programme in which they teach you rare cases to be discussed ... every Wednesday for an hour, they collect all the interns, they sit down, they present a case ..." (L:446- 448)

In this programme, she also had a "weekly log" (L:428) and went to random settings under supervision by the OT department. Moreover, hospital F asked her to "set goals" (L:431) for each week, and then the supervisor followed up with her weekly log. Thus, Marram's feelings about hospital F's programme may be attributed to the improvement that she noticed in her internship environment.

New environment and hospital system

Marram referred to some negative environmental experiences. She felt burdened as she faced challenges in adapting to her new environment:

"Mmm, of course, there were difficulties in terms of how to adapt to the environment..." (L:305)

Although Marram felt independent once she "understand the concept of the system" (L:185), there was also a feeling of resentment where she did not know the hospital "system" (L:474) and could not "access" (L:478) this system when she started her internship. This may indicate Marram's feeling of resentment regarding the challenge of finding patient information and her need to communicate with nurses:

"... *you* have to ask the nurses ... how you get this information: this for example, was a challenge..." (L:480-481)

Workload and different personalities

Marram acknowledged that the interns' high workload was challenging and expressed dissatisfaction with this heavy workload many times in her narrative. Additionally, she faced challenges in dealing with different personalities, especially when she did not "know how to deal with patients" (L:530) if issues arose.

Being professional, working hard and asking for help

A sense of being professional, working hard and asking for help from the hospital helped Marram to overcome these environmental challenges during her internship. In fact, there was a sense of having more "meetings" (L:559) for interns, and the need for a specific "intern community" (L:561), to help to solve her personality issues in the hospital environment.

"... *you* can always ask for help, not just from OTs, but from anyone else in the hospital..." (L:500-501)

"... *I* worked hard, especially since *I* was very professional with all of them, to be honest..." (L:505-506)

6.3.2.4 Lack of knowledge and practical skills

During her internship, Marram faced challenges due to her lack of knowledge and practical skills. For example, her lack of knowledge about OT palliative care affected Marram's transition and contributed to her dissatisfaction, as she described palliative care as being "very new for me" (L:438) and acknowledged that she "did not know that OT has a role" (L:439) with palliative care patients. Therefore, increasing knowledge was an important factor from Marram's perspective, and was achieved through "intensive reading" (L:315) during her internship, which might be a skill she developed from the PBL modules, and attending "lots of online courses" (L:322), which helped her to address her lack of knowledge, particularly during the first two months.

Marram's feeling of inferiority regarding her lack of practical skills was when she faced a challenge when the hospital staff write "documents by hand" (L:364). Her description of this as "*very difficult, very strange*" (L:364) indicated that she found note-writing challenging. Additionally, she did not know how to do "sub-notes" (L:365) and different hospitals settings had "different notes" (L:365), which again emphasised Marram's feeling of inferiority regarding her lack of note-taking skills. This might be linked to Marram's experience before starting her internship period; however, she referred to her feelings regarding theoretical note-taking, as she felt that hospital note-taking was:

"... very different from what they taught you in theory..."(L:366-367)

6.3.2.5 Impact of Covid

Marram expressed resentment towards the impact of Covid. She described this as a challenge, especially at the beginning of her internship, which she started late because of Covid, working only two days per week for the first two months. Thus, Marram did not benefit from these first two months and did not feel tired at all, as there was not a lot to do. She felt that she had not had to put in much effort in the first two months:

"... beginning of Covid, frankly, for the first two months, I was never tired, I did not feel any effort. I felt like it was fieldwork, you know, I felt that I had not benefited"
(L:317-318)

While Marram did not cover Covid patients, the lack of protective equipment was a concern, as she mentioned that "N95 masks were only prescribed for therapists" (L:158) and not for interns. Thus, sense of not feeling valued appeared in Marram narrative, as she suggests that the interns were less important than other staff or that there was not enough PPE equipment for everyone. Marram also described feeling resentful and dissatisfied that the hospital could not control Covid issues:

"... then you find out that [patient] is under-testing, then later they test positive, **ah**, this is a real problem and frankly the hospital cannot always control it ..." (L:482-484)

This theme, 'Internship experience', has explored Marram's experience with the enablers and barriers that she faced during her internship. Her narrative included starting practice (been aware, confidence), supervision factors, the environment (different experience, hospital F, the new environment and hospital system, workload and different personalities, being professional, working hard and asking for help), lack of knowledge and practical skills (palliative care and note-writing, reading, online courses), and the impact of Covid.

6.3.3 PBL Impact

This theme describes how PBL impacted Marram's experience. It had a clear influence on her transitional experience, which can be divided into inter-personal impact (communication skills, clinical skills, confidence, teamwork abilities and personality), cognitive impact (clinical knowledge, logical thinking and problem-solving) and task-supporting impact (information gathering, involving caregivers, dealing with patients and familiarity with cases).

6.3.3.1 Interpersonal impact

Marram mentioned that the PBL course had helped with her communication skills during her internship. She described it as helping her to know "the right questions to ask" (L:460). Furthermore, her sense of confidence was confirmed when she also described herself as being able to present cases:

"... there is a kind of confidence, you present your patients..." (L:109-110)

Marram voiced her ability to report "any problem" (L:100) during internship sessions, which further emphasised the influence of PBL, as she had covered this in her PBL course. She also acknowledged that PBL had improved her communication skills, polishing her existing skills so that they were more effective during her internship:

"*Umm*, maybe I can tell you that my communication was affected, ... interdisciplinary meetings just guide you, but you have the skills, **ah**, you know the saying: it *polishes your skills*. I mean, you already have skills, **yes**, but it [PBL] makes them more effective..." (L:357-360)

Although Marram stated that she already had skills and that PBL just kept them more active, there was a sense that the clinical skills learned from PBL did not influence her practice, as she stated "*skills – no*, I think it's, *personally*... I feel that my skills improved more in summer training" (L:348). However, PBL helped Marram in noticing "patient

behaviour" (L:102), which is a clinical skill. Moreover, she felt that she was able to apply clinical skills learned in the PBL course in the hospital context, suggesting that PBL did influence some clinical skills, although these might be less important than the skills she learned during her summer training.

The PBL courses also boosted Marram's confidence when she "presented things for your patient when you have achieved an improvement" (L:109). Moreover, there was a feeling of support, as the PBL course influenced Marram's experiences through improving her teamworking abilities during her internship. Marram explained that PBL had helped her to "work jointly with members of other teams" (L:96), such as social workers, primary doctors and nurses. She also acknowledged that PBL had improved her personality due to her confidence and ability to explain things to the patient when they have achieved an improvement:

" ... as for personality, there was improvement..." (L:110-111)

All of the above indicate how inter-personal aspects of PBL influenced Marram's experiences during her internship by improving her communication skills, clinical skills, confidence, teamwork abilities and her personality.

6.3.3.2 Cognitive impact

Marram acknowledged that clinical "knowledge" (L:348) learnt in the PBL course had influenced her practice. She also talked about her ability to apply this knowledge in the hospital context, such as "documenting cases properly" (L:386), "problem-solving" (L:390) and "logical thinking" (L:459). Moreover, Marram confirmed that PBL had increased her clinical knowledge, thus helping her in her internship:

"... I learned these things in interdisciplinary and group intervention [PBL]..."
(L:463-464)

Another cognitive effect that the PBL course had on Marram's experience during the internship period was in improving her problem-solving skills, which consequently influenced her practice. She described that PBL helped her to "know the problem as an OT" (L:459). PBL also influenced Marram's logical thinking, as she described the relationship between this ability and the PBL course:

"... I mean logic thinking..." (L:458-459)

6.3.3.3 Task-supporting impact

The task-supporting subthemes talked about information-gathering, involving caregivers, dealing with patients and familiarity with cases.

PBL also helped Marram's information-gathering skills during her internship, which were helpful when knowing how to ask questions:

"... how to take necessary information, how to take history very well, what is the right question to ask..." (L:459-461)

Marram also acknowledged that PBL influenced her experience by helping her to understand "caregiver involvement in sessions" (L:103), to know how to "deal with patients" (L:205) by herself, and to be "familiar with cases" (L:336) before her internship.

6.3.4 Fieldwork

This theme talks about the benefits of fieldwork before and during Marram's internship and how she compared it with PBL. Marram referred many times to fieldwork, acknowledging its benefits and comparing it with the PBL course. She believed that the fieldwork was close to PBL in terms of practical benefits but that fieldwork was more helpful than PBL in supporting her transition. Thus, fieldwork was mentioned as a theme in her narrative, with three subthemes: fieldwork while studying, fieldwork benefits in internship and comparison with PBL.

6.3.4.1 Fieldwork while studying

Marram expressed that she had felt fear during her university studies, "shivering" (L:211) in response to some situations in her fieldwork. She felt pressure from her supervisor during fieldwork practice, as she was given responsibility for patients despite being a student. Marram also described feeling very tired in the hospital environment during the fieldwork module, as she was moving from "building to building" (L:308). There were also occasions when she was not allowed to "look at the system or read patients' files" (L:397) for reasons of confidentiality. Thus, there was a sense of low confidence at the beginning of her fieldwork practice, although as time progressed, the fieldwork "let me... I have to be confident" (L:220).

6.3.4.2 Fieldwork benefits in internship

Marram conveyed a feeling of improvement due to the fieldwork, acknowledging that it had increased her "confidence" (L:220) during her internship, linked her "practice and theory" (L:242), shaped her "skills" (L:243) and led her to be a "good practitioner" (L:243). She also emphasised that fieldwork helped her to "learn assessment" (L:255) and find out about real practice at hospital, and to be "familiar" (L:363) with the hospital system. Therefore, there was a sense that fieldwork had prepared her for practice more than PBL, as she had visited hospitals, seen patients repeatedly and talked to therapists during her fieldwork experience, whereas she did not do this in her PBL courses.

The above benefits of fieldwork might indicate that previous experience in OT (e.g., hospital) had more influence on Marram's transition experience than the teaching method (e.g., PBL), and that there was a need to increase practice modules during the university period to facilitate transition.

6.3.4.3 Comparison with PBL

Marram compared her fieldwork with PBL. She felt that one of the fieldwork modules was like PBL, as she selected "some interesting cases and discussed them with my preceptor" (L:30). She also acknowledged that fieldwork is close to PBL in terms of practical benefits:

"... one of the most important things is that fieldwork experience is close to PBL..."
(L:245-246)

She also highlighted a contrast, stating that fieldwork dealt with "real diseases" (L:58) with real patients, whereas PBL did not involve real patients. Therefore, the fieldwork modules taught her more about real practice than the PBL courses. Marram referred to PBL's shortcomings compared to fieldwork. She claimed that fieldwork let her learn more, while the PBL course was "half-and-half" (L:296), as fieldwork allowed her to learn from real cases.

"... these things are not learned in interdisciplinary team and group intervention [PBL], no, you only see these things in the fieldwork..." (L:286-287)

Marram also explained that PBL increased her communication but acknowledged that this was "mainly because of my fieldwork experience" (L:357), and that the PBL course just guided her. She therefore felt that fieldwork helped more with her transition than PBL:

"... if you asked me to rank them, I would tell you that fieldwork is number one, group-intervention is number two, and interdisciplinary teaching is last..." (L:333-334)

6.4 Adam's narrative

Adam studied OT in one of Riyadh's universities. His experience of PBL was limited to some OT modules and he had some previous practical experience before he started his internship, including three modules' fieldwork experience (three hours/week) and clinical training in his third year (bed sourcing, bed management, vital signs and positioning).

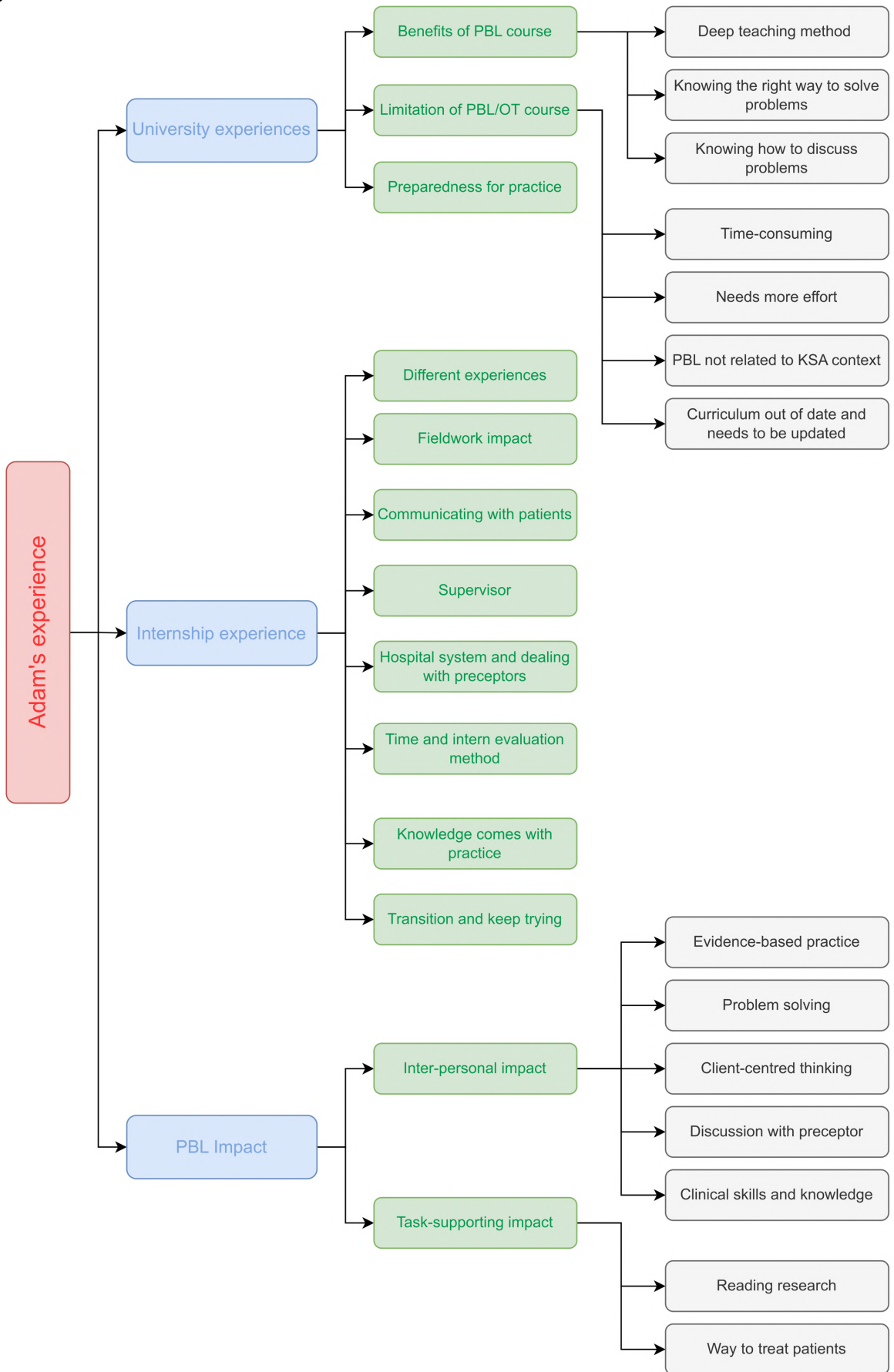
At the beginning of the interview, Adam explained the university system and the departments, and then moved on to explain how the OT course was delivered. Adam took two preparatory compulsory years, two years of OT specialty, and his fifth year was an internship. The course structure in his university was a mixture of block format (where students study one subject at a time over several weeks) and the traditional semester model, and he acknowledged that he took PBL at university.

During the interview, Adam had no difficulty in remembering the PBL courses, as he explained that some modules depended on PBL, especially in the third and fourth years, although PBL modules were not applied in the first and second years. Adam also described how PBL was delivered, setting out the 11 steps followed by the university (explained early in chapter two). However, he emphasized that the application of PBL depended on the lecturers, with some following the steps closely while others focused on the knowledge that students needed and did not follow all steps.

Adam explained that PBL was first integrated with clinical training, such as bed sourcing and bed management. However, he acknowledged that in the third year, some modules were pure PBL, with lecturers providing a 'problem' scenario and students finding the solution, and in the 4th year, they followed the 11 steps closely. Adam described the interdisciplinary case management module as pure PBL, following the eleven steps. He also described one of the topics covered, which was a case of a patient with Alzheimer's disease and her daughter. Adam had covered acute neurology in his first two months as

an intern, orthopaedics in the next two months, and at the time of interview, he was in the neurorehabilitation area. Themes from Adam's narrative are presented in Figure 9.

Figure 9: Adam's themes



Adam's themes

There are three themes and thirteen associated sub-themes in Adam's narrative. These themes and sub-themes will be discussed using Adam's words where possible (see Figure 9).

6.4.1 University experiences

This theme represents the time before internship that Adam mentioned during his interview. It has three subthemes: benefits of PBL course, limitations of PBL/OT course and preparedness for practice.

6.4.1.1 Benefits of PBL course

Adam acknowledged many benefits of the PBL modules. He said "we were getting deeper" (L:99) to emphasise his feelings regarding the benefits of PBL, as it was a deep method of studying for which he needed to "read research" (L:100) about the PBL cases in advance. This opinion is consistent with the literature that states that PBL encourages deep rather than surface learning, where the deep approach requires students to relate information to prior knowledge, structure ideas into comprehensible parts and critically evaluate the knowledge; whereas the surface approach focuses on text memorizing and employing rote learning as processing strategies (Dolmans et al. 2016). Thus, Adam felt that PBL as a teaching method forced him to "take advantage" (L:103) of his studying and emphasised that PBL helped him to learn certain skills, such as knowing "the right way to solve problems" (L:107) and "how to properly discuss the problem" (L:108).

6.4.1.2 Limitations of PBL/OT course

Adam recognised some limitations of the PBL OT curriculum. First, he felt that it was time-consuming and required more effort, explaining that PBL "takes time" (L:171, 245) and "effort" (L:172). Second, there was a sense that it was removed from reality: Adam reported that some of the modules used case studies taken from the "AOTA" (L:346), i.e. the American Occupational Therapy Association. Adam felt that he "will not benefit from it" (L:347), as it related to the American context and was not applicable in the SA context

thus creating a sense of contradiction. Finally, Adam described how he believed that the OT curriculum generally was out of date (before 2010) and needed to be updated to be more meaningful and appropriate for students (to fit into SA context):

" ... even the research needs renewal: it is not reasonable that in some blocks, the most recent research is from 2009-2010..." (L:363-365)

6.4.1.3 Preparedness for practice

Adam felt that generally, the curriculum did not prepare him for practice, but the fieldwork did. This sense of satisfaction regarding the "fieldwork" (L:180) module might be because he felt that going to hospitals prepared him for practice. Thus, during his internship, Adam noticed that students "who were going to hospital" (L:184) during their studies were more prepared for practice. Adam felt that the PBL module prepared him for practice, but that the university did not focus enough on this module:

"Do you feel that the PBL course has prepared you for practice? Yes, but I did not expect to take it, *[hesitating]*, or to focus on it more [PBL] ... *I do not feel that we benefited from it in terms of practice...*" (L:198-198)

Adam felt that he had not benefited from the PBL model compared to fieldwork because in fieldwork, he was "going to hospital" (L:181) and seeing therapists, thus learning "how to deal with patients" (L:187), which suggests that the fieldwork was more meaningful for him than the rest of the curriculum in terms of preparedness for practice.

The overall sense of Adam's experiences before he started internship was focused on his acknowledgment regarding some benefits of the PBL course during his studies, some limitations of the OT course during the university period, and his preparedness for practice in terms of the OT curriculum, fieldwork and the PBL courses.

6.4.2 Internship experience

This theme describes Adam's experience in the internship period, which can be divided into seven subthemes: different experiences; impact of fieldwork; communicating with patients; supervisors, the hospital system and dealing with preceptors; time and interns' evaluation method; knowledge comes with practice and transition and keeping trying. These subthemes explored Adam's placement experience, including enablers and barriers that influenced his internship experience.

6.4.2.1 Different experiences

This subtheme is related to the different experiences that Adam faced during his transition. Basically, Adam acknowledged that the first period was the "most difficult period" (L:321) in his internship. However, his narrative conveyed a sense of having "*different experiences*" (L:133) between internship settings such as acute neurology, orthopaedics, and neurorehabilitation. Adam described his experience in acute neurology as treating patients "more mentally and physically" (L:135) following car accidents. However, in orthopaedics, as he treated patients with more "passive range of motion" (L:137), as most patients were bedridden. In neurorehabilitation, patients tended to be in "good physical condition" (L:139), so he worked more on "hands and endurance" (L:140). Therefore, there was a sense of satisfaction because he could see patient improvement in neurorehabilitation settings:

"... *honestly*, you see the improvement in neurorehabilitation..." (L:141)

Adam's feeling of having different experiences was also associated with his experience in internship, as it was very different from his fieldwork: in internship, he "communicates with patients" (L:207), not just conducting "observation" (L:208) as in fieldwork. Moreover, Adam felt the internship period was a time when he needed to be "more punctual, stricter" (L:220) and consider timing far more than in fieldwork. This difference in levels of experience might indicate the difficulties that Adam faced in his internship, and specifically during the first period of his transition.

6.4.2.2 Impact of fieldwork

This subtheme talks about the impact of fieldwork during Adam's internship and how he compared it with PBL. There was a feeling of support, as Adam believed that the "fieldwork module" (L:145) had helped him to adapt to the internship, even though it was "observation without intervention" (L:147). This was through "knowing the atmosphere of the hospital" (L:148), "knowing the therapists" (L:149), familiarity with OT areas, "knowing the situation in the hospital" (L:151), knowing "who is my administrator" (L:152) and knowing "who I belong to" (L:152). Thus, Adam voiced that he felt "comfortable" (L:152), further emphasising how his previous fieldwork experience had helped him, and there was "*no pressure*" (L:153) when he moved to practice thanks to his fieldwork. Consequently, Adam did not feel that he faced many challenges when he moved to practice:

"... I did not feel that I faced many challenges..." (L:154)

Moreover, there was a feeling of improvement from fieldwork: Adam recognised that the fieldwork module had helped him in his internship even though it was "just observation" (L:307), describing it as "*very very very helpful*" (L:308), whereas PBL had been less helpful:

" there is, but frankly not much..." (L:310)

A possible explanation for this is that the fieldwork linked Adam to the real-world OT practice environment while PBL was in the university environment and some cases were not linked to the Saudi context. It thus appears that previous practice had more influence on Adam's transition experience than teaching method (e.g., PBL), and from his perspective there is a need for more practice modules during university period to facilitate transition.

6.4.2.3 Communicating with patients

This subtheme talks about the impact of communication on Adam's experience when he first transitioned to internship. Adam explained that one factor that had helped him to overcome internship challenges was knowing how to "communicate with patients" (L:222) in hospital. He emphasised that he "put pressure" (L:230) on himself until he could do this. This sense of putting pressure on himself to communicate with patients helped him to adapt during his internship, reflecting his sense that internship was different from fieldwork, as it required him to "communicate with patients" (L:207) and not just observe. He felt that during his internship, there was a "connection with patients" (L:213), which created a sense of belonging to a speciality and influenced his transition.

6.4.2.4 Supervisors

There was a sense of support from supervisors at beginning of Adam's transition, as he described that being with a good therapist at the beginning helped him "break the line between studying and internship" (L:301). Adam also acknowledged that having a good preceptor helped by enabling him to "know the role" (L:233) in the hospital context from an expert therapist. However, Adam referred to some supervision issues, when he described that if there was a "*claim* [misunderstanding]" (L:324) with a supervisor, he had to live with pressure from this supervisor for two months. Therefore, Adam considered that having a good and supportive supervisor during the internship period was one of the most important things affecting him and his friends.

6.4.2.5 Hospital system and dealing with preceptors

Adam admitted that he had faced challenges during his transition; however he explained that he overcame these challenges once he got to know the "hospital system" (L:221) and learned how to "deal with preceptors" (L:222). Adam also emphasised the need to know "what's right and wrong" (L:231) in the hospital environment, which helped him to adapt to this new environment. He also believed that hospital N's environment was a positive factor, and he knew others (from fieldwork) before starting the internship:

"... the environment was good, and we knew each other, as I told you before..."
(L:303-304)

6.4.2.6 Time and interns' evaluation

Adam conveyed a sense of resentment when he described facing a challenge regarding long time spent at the hospital. Nevertheless, he acknowledged that he overcame the time challenge "two weeks" (L:155) into his transition. Additionally, Adam described "a *little blurry*" (L:332), which emphasised a further sense of resentment, as the evaluation method for interns was unclear. Consequently, the time issue and unclear evaluation criteria highlight the environmental difficulties that Adam faced in his internship.

6.4.2.7 Knowledge comes with practice

As explained earlier, Adam did not feel that he "faced many challenges" (L:154) when moving to practice, as he had done fieldwork before. He also believed that most of his challenges were "personally" contained (L:340), and thus were not related to others or to the method of study. During his narrative, Adam explained that he faced some challenges regarding his lack of knowledge; however, he acknowledged that "knowledge comes with practice" (L:329), which may explain why he regarded this as a personal issue and not related to others or to the teaching method.

6.4.2.8 Transition and keeping trying

This subtheme talks about how the need to "keep trying" helped Adam to adapt to internship. This adaptation made Adam's transition easier, and he admitted that he tried to adapt by staying in "the hospital role" (L:226) as much as possible. This was through "not being late" (L:226) in attending his internship and making the internship his top priority. Moreover, Adam explained that he kept "pressure" (L:230) on himself until he adapted. Thus, trying to adapt by "getting used to " (L:320) the new environment helped Adam in his transition.

To sum up, this theme has explored Adam's experience with the enablers and the barriers that he faced in his internship. Adam's narrative included his different experiences, the impact of fieldwork, communicating with patients, supervision, the hospital system and dealing with preceptors, time and interns' evaluation method, knowledge comes with practice and continually trying to adapt.

6.4.3 PBL impact

This theme describes how PBL impacted Adam's experience. Adam felt that the PBL course was meaningful during his study and helped him a lot in interventions. He also did not believe that there was anything to prevent the transfer of what he had learned in his PBL course to the hospital, except that the case scenarios used in PBL were not specific to a SA context. In fact, he was able to transfer what he had learned in the PBL course to the hospital context very smoothly. This is interesting as Adam previously seems less positive about the benefits of PBL compared to fieldwork, but there is a clear influence of PBL emerged from his narrative. The impact was divided into inter-personal impact (evidence-based practice, problem-solving, being a client-centred thinker, discussion with preceptor and clinical skills and knowledge), and task-supporting impact (reading research and way to treat patients).

6.4.3.1 Interpersonal impact

It appeared that PBL had influenced Adam's practice, as he stated that it had helped him to apply "evidence-based practice" (L:239). Initially, Adam acknowledged that PBL had enabled him to apply "evidence-based intervention" (L:165) during his studies by encouraging him to "read more research" (L:166). This application of "evidence-based practice" (L:256) in interventions during his internship was not from his "personal effort" (L:256). Adam emphasised that PBL had helped his transition by enabling him to do things "based on research, not on personal effort" (L:241).

Adam acknowledged that PBL influenced his experience by helping him to solve problems. This may be considered as a skills developed from the PBL modules and carried over to his internship period. Adam acknowledged that PBL let him know if "the problem is correct" (L:108) and to identify "what is the main problem" (L:109). Moreover, Adam described sometimes expecting one issue to be "the main problem" (L:110), but later discovering that "it is not the main problem" (L:110) and that another problem required more attention.

Another PBL interpersonal impact on Adam's practice was being a "client-centred" (L:283) thinker. Indeed, Adam described the benefits of PBL's "interdisciplinary" (L:284) nature, such as hand, neurology and orthopaedic therapists discussing the same subject and patient, as he had done in PBL. Therefore, PBL influenced Adam's internship by keeping the patients at "the centre of the discussion" (L:287) and being a client-centred thinker.

Adam also acknowledged that PBL influenced his practice through discussion with his preceptor, He explained that he found that PBL helped in his discussions with his preceptor, especially knowing "what's best for the patient" (L:282), "the way of treatment or the plan of care" (L:281). Moreover, Adam stated "Yes" (L:255) when asked if he was able to apply the skills and knowledge learned from the PBL course in the hospital context, although he did not explain how those clinical skills and knowledge affected his practice.

6.4.3.2 Task-supporting impact

Adam explained that PBL taught him to read research, thus helping with his transition, as when he did something in his internship, it was "based on research" (L:241), especially during his neurology placement, as he acknowledged that he had read lots of "research about TBI [traumatic brain injury]" (L:242). Adam emphasised that PBL influenced his experience by enabling him to read research involving "properly conducted trials" (L:257).

Additionally, PBL influenced the way Adam treated patients, such as when using "splints" (L:255) and "right positioning" (L:258). For that reason, it brought a sense of relief: Adam felt comfortable treating patients based on information taken from reliable, evidenced-based sources:

" ... you will give it [to the patient] while you are comfortable, and you know that you are doing the right thing... helped me lots when *you* give a patient treatment based on books" (L:261-264)

All the above subthemes described Adam's feelings about how PBL had influenced his experience. This was through inter-personal impact (evidence-based practice, problem solving, being a client-centred thinker, discussions with preceptors and clinical skills and knowledge), and task-supporting aspects (reading research and how to treat patients).

6.5 Mohammed's narrative

Mohammed studied OT at a university in Riyadh. Courses were structured in his university through a combination of traditional teaching (lecture-based) and PBL, where 80% of the course was delivered through traditional methods. His experience of PBL was limited to some OT modules (neurology, interdisciplinary, group intervention), as the university did not primary focus on the PBL method. Mohammed believed that PBL was not mandatory as a teaching method in his university, as there were so few PBL and there was not a specific process for PBL.

In PBL, Mohammed explained that every group speaks and gives opinions in the discussion. However, sometimes each group discusses its own PBL cases. Therefore, Mohammed mentioned that the topics covered in PBL involved positioning (neurology) and a case about a mother and her daughters (interdisciplinary), and sometimes every group worked alone to find a solution to a different case (group intervention).

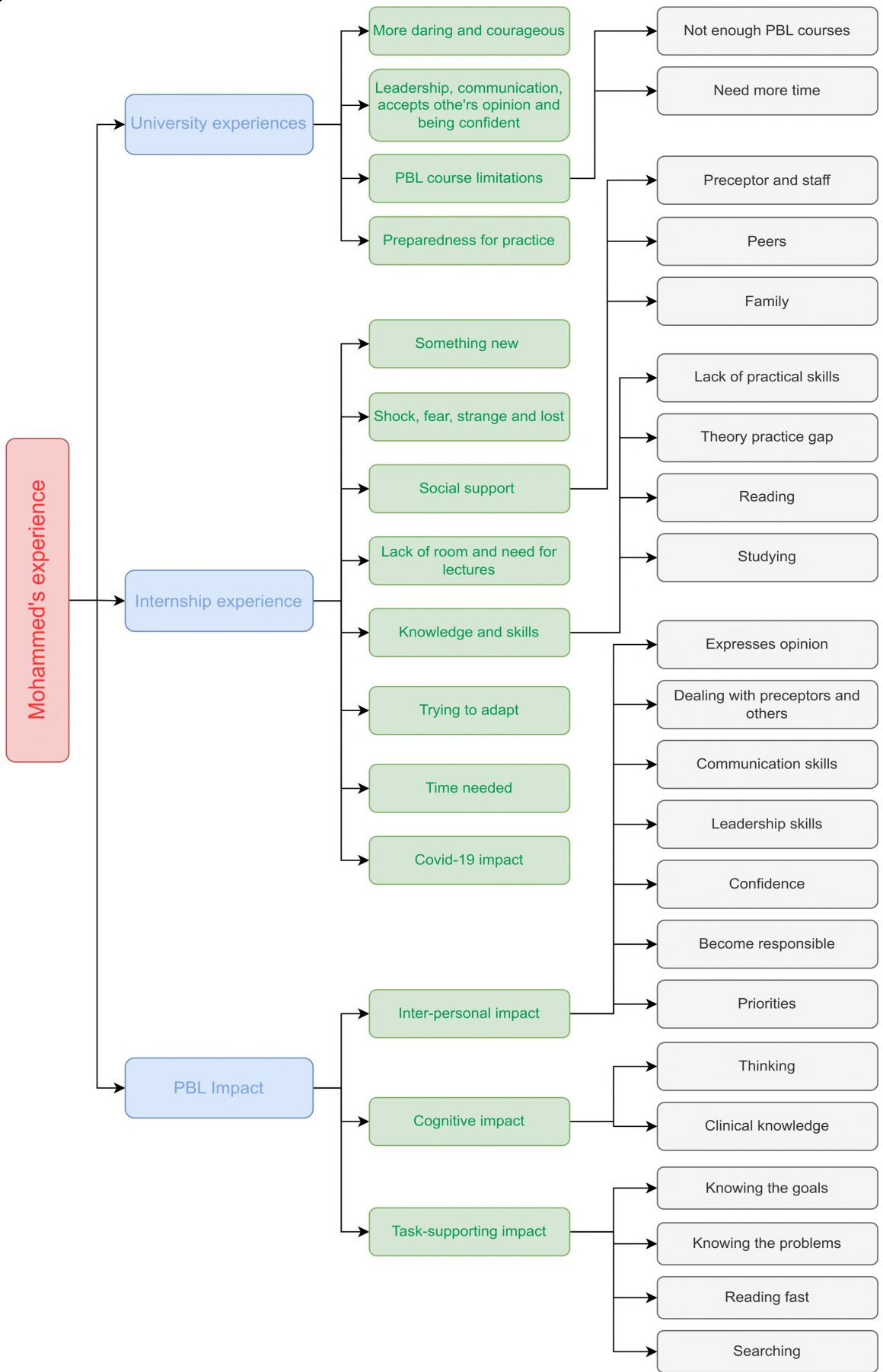
Mohammed also had previous practice experience before he started his internship, namely three modules of fieldwork, which involved just observation, once a week for the last three terms. Moreover, he had previous clinical training during his university period, such as neurology training, patient positioning, paediatrics, and PROM (Passive range of motion), although this was on dolls rather than people and was not realistic.

Mohammed stated at the time of the interview that he was in his last month, as he had eleven months' internship experience at one hospital (N). He confirmed that he had covered neurology, orthopaedic and burns in the first six months (main hospital N), attending twice a week due to Covid. In the second five months, Mohammed covered oncology and general paediatrics (at paediatric hospital N), where he attended every day, so he felt that the second period was a great improvement.

At beginning of each area, Mohammed observed, especially if new assessments were involved. He felt that his hands-on skills developed more during his internship. Mohammed also believed that he was still learning during his internship, as he was not

yet an employee or a therapist. He acknowledged that the first two weeks in each area were somewhat difficult. He faced challenges in the burns area, as it was different from other areas, and he found it uncomfortable to look at burns patients. He felt that this was his most difficult period. Themes from Mohammed's narrative are presented in Figure 10.

Figure 10: Mohammed's themes



Mohammed's themes

There are three main themes and fifteen associated sub-themes in Mohammed's narrative, which will be discussed using Mohammed's words where possible (see Figure 10).

6.5.1 University experiences

This theme has four subthemes which represent Mohammed's time at university.

6.5.1.1 More daring and courageous

Mohammed expressed positive feelings regarding the benefits of the PBL course. He acknowledged that PBL courses made him "more daring" (L:103), as he was usually afraid to express his opinion. His description of himself as "more courageous" (L:115) further emphasised the benefits of PBL, where the discussion in PBL courses are not subject to "right or wrong" (L:104) answers, so he became "*more daring*" (L:105). Mainly, the two educational methods differ in terms of control. In the traditional lecture, the lecturer has control: s/he asks the questions and does most of the talking. In contrast, PBL creates an environment to talk, discuss and exchange ideas (Dolmans et al. 2016). In Mohammed's case, he was not "keen to participate" (L:122) and give his opinions in traditional lectures, whereas in PBL, he "*needs to participate*" (L:126), "*need to express opinion*" (L:127), and "*need to speak*" L:127. Thus, he emphasized that PBL "strengthened my courage" (L:194).

6.5.1.2 Leadership, communication, accepting others' opinions and being confident

Further benefits of PBL included a sense of gaining leadership skills and being responsible. Mohammed felt that PBL developed his "leadership skills" (L:108, L:195) when he led PBL groups, and this led to a sense that he could "take responsibility" (L:108, L:199), as PBL allowed him to be responsible to "discuss" (L:196) and "talk" (L:197) during sessions.

Mohammed also acknowledged that PBL taught him to accept "others' opinions" (L:116), and improved and developed his "communication skills" (L:117, L:195) during his studies. The above benefits indicate Mohammed's growing confidence:

"The PBL ... *I had to say a little bit, I need to speak, I must express my opinion, ... I must make a point, I needed to participate, as I told you: it strengthens your communication, makes you have more confidence in yourself*" (L:123-129)

6.5.1.3 PBL course limitations

Mohammed identified some limitations with the PBL course. He explained that there was "little" (L:63) PBL. Mohammed also acknowledged that PBL was "not applied 100%" (L:68), as it was only used in some courses in his university and not all steps were applied. Additionally, he felt that more time was needed for PBL and emphasised that sometimes a PBL class would end without giving each case "its due right" (L:70).

6.5.1.4 Preparedness for practice

Mohammed acknowledged many times that he did not feel that university prepared him "well" (L:265) for practice; describing it as "*just a little*" (L:203) and "*not very strong*" (L:214). He believed that the university programme prepared him to "deal with others" (L:209), to be "morally good more than practical" (L:210), to "control yourself" (L:211), "handle pressures" (L:211), "arrange priorities" (L:212) and "deal with problems" (L:213) more than providing practical skills.

In contrast, Mohammed felt that PBL "prepared and developed" (L:222) some of his skills. Nevertheless, he explained that there was a lack of "real practice" (L:416) during his university period, as students did not go to hospital "a lot" (L:419) and the fieldwork was usually just "observation" (L:419). Mohammed felt that there was a need for an "update" (L:426) and for "more practice" (L:420) in hospital during the university programme, and for "more hands on patients" (L:436) during university practice, rather than observation or work with dolls.

In summary, the overall sense of Mohammed's experiences before his internship was characterised by his acknowledgment that the PBL course had some benefits (more courage and daring, participation, expressing opinion, speaking up, leadership skills, taking responsibility, discussing and talking, accepting others' opinions, improving communication skills, being more confident), some PBL course limitations (not enough PBL, steps not fully applied, more time needed), and his preparedness for practice in terms of the university programme and the PBL courses.

6.5.2 Internship experience

This theme describes Mohammed's experience during his internship period. His experience can be divided into six subthemes: something new, shock, fear, strange and lost, social support (preceptor and staff, peers and family), lack of room and need for lectures, knowledge and skills (lack of practical skills, theory practice gap, reading, studying), trying to adapt, time needed and the impact of Covid. Those subthemes explored Mohammed's experience at his practice placement, including enablers and barriers that influenced his internship experience.

6.5.2.1 Something new

Mohammed described his initial experience as gaining "new information" (L:157) and seeing "more cases" (L:158) than he had studied before. However, he felt lost for the first six months when "*the vision was not clear*" (L:161), as he was attending for just two days per week. This may explain Mohammed's feeling about "benefiting and learning" (L:163) more from the last five months in his internship. Moreover, Mohammed felt that "some areas are specialized" (L:164), meaning each area has unique characteristics in the hospital context, which might have influenced his early experience.

There was a feeling of facing "something new" (L:204) at the beginning of his internship: a "new experience" (L:242) "inside a new place" (L:241). Indeed, during his transition, "everything [was] new" (L:242, 425).

6.5.2.2 Shock, fear, strangeness and feeling lost

Mohammed described negative and mixed feelings, experiencing '*shock*' when he started in each new internship area, and when he started his internship as a whole, as it was so different from his studies:

"...after we started practising [internship], every time I went to an area, I was shocked by something new again..." (L:204)

"... If you go to internship, you will be *shocked* by things, as if something else is different..." (L:424)

Moreover, Mohammed felt "*strange*" (L:245) in new places, which led to his feeling lost, as he did not know "what to do" (L:245) and "how to act" (L:245). He felt a "little fear" (L:242,244) and was anxious about "making a mistake" (L:242) and about people "speaking" (L:243) about him. These negative feelings illustrate the extent of the challenges that Mohammed faced when he moved into internship, as he discovered that practice is "*very different* from studying" (L:205), with the latter only giving him the basics.

6.5.2.3 Social support

Mohammed acknowledged that the "hospital environment" (L:368) helped him by providing social support, especially in the initial period when he and the staff were close in age, so they understood his way of "thinking" (L:370). He also emphasised that the working environment helped his "productivity" (L:373), strengthened him and boosted his "self-confidence" (L:374).

A sense of social support also emerged from Mohammed's experience regarding preceptors and staff. He acknowledged that his supervisors and all staff "were cooperative" (L:375) during his internship: the preceptor helped by enabling interns to "develop more and learn" (L:372) and treated them as "friends" (L:372). Indeed, he emphasised that staff were "very cooperative" (L:396) in the burns area, and were "understanding" (L:396), which improved his experience.

Another source of social support that helped Mohammed was from his peers and family. Mohammed acknowledged that his family helped him by being "considerate" (L:364) and "cooperating" (L:364) with him. He also explained that helpful "discussion" (L:355) and "assistance" (L:357) from his peers made his transition easier. He described that discussing cases with his friends during his internship was "*similar to PBL*" (L:381). This indicates how PBL influenced Mohammed's experiences during his internship and facilitated his discussions during his transition.

6.5.2.4 Lack of room and need for lectures

Mohammed expressed resentment when he described that there was no "place" (L:453) or room for interns in the hospital for the first six months. This may indicate a lack of appreciation or respect for interns compared to therapists. Moreover, he voiced the need for lectures "at least once a week" (L:464), which would have helped with his transition.

6.5.2.5 Knowledge and skills

During his internship, Mohammed faced challenges regarding his lack of practical skills, especially at the beginning, such as "carrying the child" (L:260). He also acknowledged a gap between theory and practice, and that practice is "different" (L:159) from what he had read at university. However, Mohammed acknowledged that "reading more" (L:160) and "studying" (L:160) helped him during his internship.

6.5.2.6 Trying to adapt

Trying to adapt was one of the things that enabled Mohammed during his internship. He felt that he adapted to different settings by "benefitting" (L:172) from each area, such as "splinting" (L:174) in the orthopaedic and burns areas. In fact, he acknowledged that he "forced" (L:402) himself to adapt, "trying to keep going, trying to work and trying to apply" (L:404), especially in the burns area.

6.5.2.7 Time needed

This subtheme revolved around Mohammed's need for time to adapt, improve his practical skills and feel comfortable in his internship. Mohammed felt that the first two weeks in each area were a "little difficult" (L:251) but he adapted with time, "accepting things more" (L:247) and "learning fast" (L:248). Interestingly, he felt that he adapted after "two weeks" (L:248) in each area when he got used to the routine and the system, but he continued to adapt and develop. These two weeks seem to mark the point in time when Mohammed realized that he had enough experience to be confident or had improved his knowledge and skills.

Mohammed also felt better in the "second period" (L:257) of his internship (last 5 months), when he attended daily, and his hands-on practice skills improved, such as holding and dealing with children and doing positioning. This sense of time needed was also clear in Mohammed's experience of transition, as he felt that with time, he started to apply practical skills, became more comfortable and develop his skills:

" ... then, with time, we started to apply it [practical skills], / became more comfortable, and my skill developed more..." (L:261-262)

This subtheme indicates Mohammed's acknowledgment that he "needed time" (L:397, 406) to adapt, familiarise himself with the current practice, and the skills and previous experiences that he had learned at university.

6.5.2.8 Impact of Covid

A feeling of resentment emerged in Mohammed's narrative regarding Covid. As explained earlier, for the first five months of his internship, he could only attend twice a week due to Covid. Thus, he "did not feel integrated" (L:139) with his internship during this period and "*the vision was not clear*" (L:161). Therefore, Mohammed acknowledged that during the pandemic, lots of things had changed:

"... Corona period, many things have changed..." (L:444-445)

The theme 'internship experience' has explored Mohammed's experience with the enablers and the barriers that he faced during his internship. His narrative included something new, shock, fear, feeling strange and lost, social support (preceptors and staff, peers and family), lack of room and need for lectures, knowledge and skills (lack of practical skills, theory–practice gap, reading, studying), trying to adapt, time needed and the impact of Covid.

6.5.3 Impact of PBL

This theme describes how PBL impacted Mohammed's internship experience. Mohammed believed that the skills and knowledge learnt in the PBL course had influenced his practice. He acknowledged that he was able to apply and benefit from some, but not all, of those skills and knowledge in the hospital context. Some aspects were not applicable in certain areas. However, he believed that there was nothing to prevent him from applying the skills or knowledge learned from PBL in hospital.

Basically, Mohammed did not believe that there was a relationship between the challenges that he faced and the PBL course. The PBL course had a clear influence on Mohammed's transitional experience. This influence was divided into inter-personal impact (leadership skills, expressing opinions, dealing with preceptors and others, communication skills, confidence, becoming responsible, priorities), cognitive impact (thinking, clinical knowledge) and task-supporting impact (knowing the goals, knowing the problems, reading fast, searching).

6.5.3.1 Inter-personal impact

Mohammed admitted that PBL had made him "more satisfied" (L:116) about expressing his opinion and given him "more power" (L:191) in expressing his views and "making observations" (L:192) by creating an environment in which students were in control and could discuss cases and exchange ideas: "each group has a point of view and an opinion" (L:292). This underscores an additional sense of the influence of PBL on Mohammed's practice. Indeed, he explained that without PBL, he would have been inclined to "follow the preceptor" (L:229) rather than expressing his own opinions or giving ideas. Thus, PBL had given him the "courage to talk" (L:233), helping him to become "*bold*" (L:303), "*contrast* opinions" (L:307) and "accept others' opinions" (L:308) during his practice.

Mohammed indicated that PBL had impacted his internship experience by teaching him how to "deal with preceptors" (L:183) by him to "deal with others" (L:222). He also

emphasised that PBL had "strengthened" (L:128) his communication skills, improving them "*more and more*" (L:233), which benefited his practice:

" ... **skills that PBL gave you...?**... very strong communication... in particular, my communication in general has become stronger..." (L:301-313)

Another inter-personal impact of PBL on Mohammed's practice was related to discussion. Initially, Mohammed felt that previous experience of discussion in PBL was "helpful" (L:334). He emphasised that PBL helped in "discussion" (L:188), "following" (L:189) and "putting points" (L:190) to his preceptor, and had given him "more power in discussion" (L:192) in his internship. Thus, he felt that PBL discussion had benefitted his practice.

Mohammed also acknowledged that PBL influenced his practice by making him feel more confident and "responsible" (L:309) for cases in his internship. Moreover, PBL influenced his internship experience by teaching him how to prioritize:

"... it made me realise that if I have a case, I must prioritize..." (L:275-276)

6.5.3.2 Cognitive impact

Mohammed acknowledged that thinking and clinical knowledge gained from PBL had influenced his practice. Basically, PBL taught him how to "think" (L:222) during sessions, and thus influenced his internship experience by "thinking more" (L:272). It provided "new information" (L:292) and modified his "false information" (L:293). Thus, the discussions in PBL helped knowledge to stick in his mind:

"... the discussions in the PBL made the knowledge stick more than others, which benefited me in the internship..." (L:298-299)

6.5.3.3 Task-supporting impact

Mohammed explained that PBL influenced his internship experience by "knowing the goals" (L:274), both "short- and long-term" (L:275), and identifying "the problems that

occurred" (L:278). Moreover, he acknowledged that PBL helped him to "read information very fast" (L:297) and "search for information" (L:300), and therefore improved his "search skills" (L:307).

All the above subthemes described Mohammed's feelings about how the PBL course influenced his internship experience.

6.6 Anfal's narrative

Anfal studied OT at a university in Riyadh. Her experience of PBL was limited to two OT modules and she had some previous practice experience before starting her internship, namely fieldwork experience and summer training. The course structure in her university was mixed (traditional and PBL), but she stated that the majority of modules were traditional.

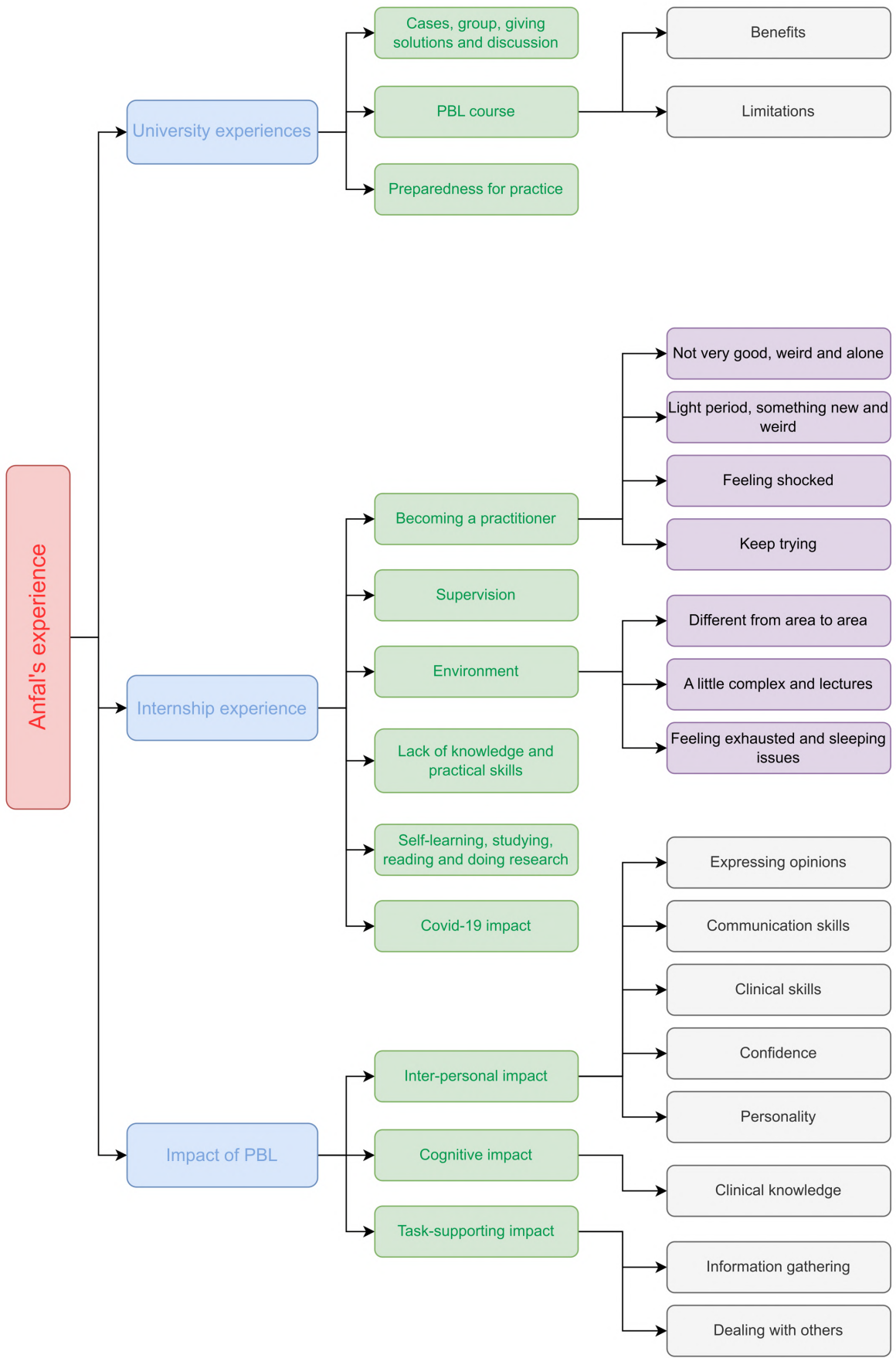
At the time of the interview, Anfal had 10 months' experience in her internship program, and had been placed at two different hospitals as an internship student (hospitals N and T). She was in her second internship placement and had covered many areas, such as orthopaedics, acute, neurology, paediatric, outpatient, inpatient, and hand therapy.

At beginning of the interview, Anfal expressed uncertainty, as she was not able to remember the PBL courses. However, she acknowledged that one of the PBL modules (interdisciplinary) was clearly PBL-based. During the interview, Anfal tried to remember the second PBL module, which she called 'group intervention'. She also described the topics covered in those PBL modules, which were Alzheimer's disease, memory loss and smoking. Themes from Anfal's narrative are presented in Figure 11.

Anfal's themes

There were three themes and twelve associated sub-themes in Anfal's narrative. These themes and subthemes will be discussed using Anfal's words where possible (see Figure 11).

Figure 11: Anfal's themes



6.6.1 University experiences

This theme represents the time before internship that Anfal mentioned during her interview. It has three subthemes: cases, group, solutions and discussion, PBL courses (benefits and limitations), and preparedness for practice.

6.6.1.1 Cases, group, giving solutions and discussion

While Anfal felt that the PBL course was meaningful for her, describing her response as "*enthusiastic*" (L:156), there was a sense that the term 'PBL' was not used at her university, as she described the PBL course as "cases" (L:28), "case management" (L:29), "groups" (L:44), "giving solutions" (L:52), "dissection" (L:53), and doing "group therapy" (L:48). These differences in description may indicate that PBL modules were not made explicit to Anfal during her studies. This would explain her uncertainty when trying to remember the PBL courses at beginning of her interview.

6.6.1.2 PBL courses

This sub-theme identifies the benefits and limitations of PBL courses from Anfal's perspective.

Anfal acknowledged many benefits of PBL modules during her studies. She described PBL as a "very good experience" (L:165) and felt that it was "more enjoyable" (L:68,70), encouraging her to look for information, read and develop opinions, compared to the traditional method. There was also a sense of a holistic perspective in the PBL courses, as she looked at the patients' families, such as the "daughter" (L:62) and knew the whole "patient's rehab plan" (L:159) in the PBL modules. Anfal emphasised her holistic view about patients when she acknowledged that PBL helped her to empathise with patients:

"... we have to feel their feelings, so that we can deal with them... / really make myself clear as a person..." (L:161-164)

Anfal also expressed a sense of independent learning through PBL: she mentioned many times that she felt that PBL enabled her to "search for

information" (L:69,75,156) by herself and "read" (L:69) about "diseases" (L:78), "medication" (L:79, 158) and its "consequences" (L:158). Thus, PBL encouraged her to focus more on finding information helped in her research module.

"...I learned [from PBL]... I am searching for information myself, and my information makes me focus on it..." (L:75-76)

Further benefits of PBL modules during Anfal's studies were that they fostered "cooperation" (L:77) and helped her to "think outside the box" (L:78), because in other forms of learning, students can seem to be in competition with each other. Additionally, it is interesting that Anfal described her feeling of motivation while studying PBL, noting how the lecturer facilitated her sense of being a "professional" (L:94), which she valued:

"... *here she motivated us, no other module was like this, ... *this meant a lot to us...*" (L:89-91)*

A sense of belonging and being heard was another benefit from the PBL course:

"... everyone shares what they know..." (L:50)

"... I have an opinion about it..." (L:69)

There was also a feeling of respect. Anfal described that PBL gives an opportunity for everyone in the group to offer their viewpoint and that all viewpoints are valid:

"... I mean, the opinions may differ, but all of our opinions are valid ..." (L:70)

In contrast, Anfal recognized some limitations of the PBL courses. She expressed confusion when explaining early in her interview that the concept of PBL was not made clear in her university and should have been made more explicit. She also referred to a sense of being removed from reality, explaining that the OT curriculum was taken from American university; thus, the case studies were out of context and not relevant to the Saudi context. Moreover, she described feeling "shock" (L:188) at the fact that many aspects of the

curriculum were contradictory or non-existent in the Saudi context, such as "visiting houses" (L:182), which is responsibility of another association in SA. Thus, Anfal emphasised the need for the curriculum to be "modified" (L:187) to fit the SA context, and the need for "more PBL" (L:385) courses, specifically "neuro" (L:386) courses.

6.6.1.3 Preparedness for practice

Although Anfal acknowledged that she did not feel that PBL prepared her well for practice generally, she did feel that it was beneficial in some areas:

" [hesitating] it [PBL] did not prepared me to practice as much as it prepared me that it's normal to discuss things, it's normal to express my opinion ... it's normal to answer questions... search very fast... made group communication very good for us..." (L:206-210)

Anfal expressed dissatisfaction when she acknowledged that the university programme did not prepare her for practice – "frankly, no" (L:176) – especially regarding "interaction with patients" (L:190), as there was no communication module in the OT programme:

"... basically, there was no patient communication module..." (L:197-198)

This might be why Anfal spoke of being "silent" (L:192) in her first days of internship, further emphasising that she was not prepared for interaction with patients:

"... I don't know, in the first days, I was silent, went in, was silent..." (L:192)

The overall sense of Anfal's experiences before starting internship focused on how she described the PBL course and her acknowledgment of its benefits and limitations. Anfal also explained her preparedness for practice in relation to PBL and the OT programme.

6.6.2 Internship experience

This theme describes Anfal's experience during the internship period and is divided into five subthemes: becoming a practitioner, supervision, environment, lack of knowledge and practical skills, self-learning, studying, reading and doing research and the impact of Covid. Those subthemes explored Anfal's experience in her practice placement, including enablers and barriers that influenced her experience during internship.

6.6.2.1 Becoming a practitioner

This sub-theme talks about Anfal's experiences when she became a new practitioner.

Not very good, weird and alone

At the beginning of her practice, Anfal explained that she found her experience was "not very good" (L:232). At first, she felt that "something was weird" (L:236), which may indicate the difficulties that she faced when she started her internship, since she acknowledged some deficits in her own knowledge and practice, such as having "forgotten how to mingle with people" (L:233), as the last term was online due to Covid, "forgotten knowledge" (L:236), as she did not study well during this last term, and feeling alone, as she was "without my friends" (L:254).

Light period, something new and weird

Anfal also expressed mixed feelings when she described the beginning of her internship as a 'light period, something new and something weird', with mixed feelings as dealt with the new environment and new roles within a new context.

"... [hesitating], it was a light period, [hesitating] something new in my life, somewhat weird, I can say that I got over it easily and I can say that I got tired to get over it ..." (L:251-252)

Feeling shocked

Anfal felt shocked when she became a new practitioner. She described that when she "studied something [in university] and apply something else in life

[practice]" (L:179). Moreover, she felt shocked that lots of things were not applicable to the Saudi context:

"... many things, I cannot remember now, but we were *shocked*, not in SA, there is nothing like them in SA..." (L:188-189)

Keep trying

Keeping "trying" (L:342) helped Anfal with her transition to practice. Her acknowledgment that she did "not feel *very tired*" (L:140) further emphasised her experience as she adapted very fast to her internship:

" ... I did not feel that I was tired: on the contrary, I felt that I adapted quickly..." (L:147-148)

6.6.2.2 Supervision

Anfal faced some supervision issues, describing some of her supervisors as "bad" (L:367). The explanation for what makes these supervisors bad compared to the good ones from Anfal's perspective is that she did not know their style or how dealing with them. Thus, knowing some supervisors in hospital N from her fieldwork experience was helpful. Indeed, she felt supported by her supervisors during her transition, as they provided advice, help and lectures to all interns:

"... gathered all of us who were in ortho: he said, 'I will give to you all [a lecture]... and I need you share with each other..." (L:241-242)

Anfal acknowledged that some supervisors were "cooperative" (L:347), gave "advice" (L:347), and provided her with feedback before she moved to another setting.

6.6.2.3 Environment

This subtheme is related to Anfal's experience in her practice placement and how the environmental factors influenced her experience during transition.

Different from area to area

Anfal's narrative conveyed a sense of different experiences between settings. She described this difference as "*lots different*" (L:120) "from area to area"

(L:124) depending on goals and times for seeing patients, and she felt that in some hospitals, OT is "*more education*" (L:135) than practical. Anfal also explained that hospitals differed regarding patients' notes, which were in checklist "forms" (L:364) in hospital T, and "full text" (L:365) in hospital N. This indicates a feeling of limitation between OT settings, as Anfal felt limited in applied OT with hospital T inpatients, as they were just acute cases: "... in hospital T, the inpatients were just acute cases, so we could do a discharge or an equipment description..." (L:113-114)

Complexity and lectures

There was a resentful feeling when Anfal's described the system at hospital T as "*a little complex*" (L:364). This feeling of complexity may explain her acknowledgement that she "took time" (L:363) to learn the system at this hospital. Prior knowledge of the system at hospital N was an environmental factor that helped Anfal during her internship. Furthermore, she felt supported at hospital T, which provided lectures "every Thursday" (L:398) during her internship.

Feeling exhausted and sleeping issues

Anfal also referred to a negative environmental experience during her experiences. She felt 'exhausted' as she faced numerous patients in some hospital environments. This contradicts what Anfal referred above, where she says she did not feel tired as she adapted quickly. This can be explained by the fact that increasing the workload and facing many patients in some hospital environments is considered a stressful feeling. This feeling of exhaustion and increasing workload may explain Anfal's acknowledgment of the sleeping issues that she faced at beginning of her internship where:

"... my sleep was messy, I was exhausted, I would come home and sleep until tomorrow..." (L:253)

However, she tried to adapt by "sleeping regularly" (L:257), which helped her to overcome her exhaustion.

6.6.2.4 Lack of knowledge and practical skills

During her internship, Anfal faced some challenges regarding her knowledge and practical skills. She felt that her knowledge level was inferior, describing her knowledge as being "*forgotten*" (L:236) and "*missing*" (L:237). Her assertion that the "lack of knowledge" (L:360) was a challenge also indicated a further sense of dissatisfaction. Specifically, she acknowledged that at the beginning of her internship, she lacked knowledge about "ortho" (L:238) and "muscles" (L:239). This might be associated with her lack of practical skills, which led to communication issues with her patients:

"... the first two weeks, the whole first month, I did not know what to say to patients when I met them..." (L:336)

6.6.2.5 Self-learning, studying, reading and doing research

Anfal considered increasing her knowledge and improving her practical skills as important factors that helped her during her internship. She achieved this through "studying" (L:244) at the beginning of her transition, doing "research" (L:253; 410), "searching for information" (L:331), "self-learning" (L:334) and trying to adapt by "reading" (L:257) at home or during breaks. These may be considered as skills and enablers that Anfal developed from her PBL modules and carried over to the internship. The impact of PBL on Anfal's experience will be explored further in the next theme.

6.6.2.6 Impact of Covid

There was a sense of resentment in Anfal's narrative regarding the impact of Covid. It affected her last term of study, because the university was forced to deliver courses "online" (L:115; 232). This had an impact on Anfal's transition, as she felt that she had "forgotten how to mingle with people" (L:233).

This theme "Internship experience" has explored Anfal's experience with the enablers and barriers that she faced during her internship. Anfal's narrative included becoming a practitioner (not very good, weird and alone, light period, something new and weird, feeling shocked, keeping trying), supervision, the environment (different from area to area, a little complex and lectures, feeling

exhausted and sleep issues), lack of knowledge and practical skills, self-learning, studying, reading and doing research, and the impact of Covid.

6.6.3 PBL Impact

This theme describes how PBL impacted Anfal's experience. While Anfal did not feel that PBL influenced her internship experience in some respects and she acknowledged that skills and knowledge learnt from the PBL course did not influence her practice, a clear influence of the PBL course emerged from her narrative about her internship period. This impact was divided into interpersonal impact (communication, expressing opinions, clinical skills, confidence and personality), cognitive impact (clinical knowledge) and task-supporting impact (information gathering and dealing with others).

6.6.3.1 Inter-personal impact

There was a sense that clinical skills learned from PBL influenced Anfal's practice, as indicated when she stated "Yes" (L:309) when asked if she was able to apply skills and knowledge learned from the PBL course into the hospital context.

Anfal referred to the benefits of PBL in helping her communication skills during her internship. A feeling of control regarding communication with others was transferred from the PBL course to the hospital context, as Anfal described that PBL had taught her when to "answer and when to be silent" (L:219). She also emphasised that PBL influenced her ability to "answer in meetings" (L:290) and "answer" (L:312) in hospital lectures. She acknowledged that the PBL course had influenced her transition by increasing her ability to "discuss" (L:313) in hospital lectures and participate in "discussions" (L:280) with hospital teams; she therefore became able to communicate without hesitation during her internship:

"... I normally speak up, I normally say something... " (L:290)

Anfal voiced her ability to "express my opinion" (L:206, 217) during her internship period, emphasising the influence of PBL. This might relate to her confidence and ability to express her opinions, which she considered to be another impact of the PBL courses her internship experience. She described herself as being "*bold enough*" (L:212) to ask questions. She acknowledged

that PBL helped her "personality" (L:212) to improve during her internship as a result of increasing her confidence and enabling her to express her opinions.

All of the above points illustrate how the PBL course (interpersonal aspect) influenced Anfal's experiences during her internship through improving her communication skills, clinical skills, confidence, ability to express her opinion and her personality.

6.6.3.2 Cognitive impact

Anfal acknowledged that clinical knowledge gained in the PBL course had influenced her practice in the hospital context. Moreover, she confirmed that PBL had increased her clinical knowledge through teaching her about some diseases and their symptoms.

"... I had knowledge from it [PBL], it taught me some diseases, it taught me ooh symptoms..." (L:314-315)

6.6.3.3 Task-supporting impact

The task-supporting subthemes talk about the impact of PBL on Anfal's internship experience in terms of gathering information and dealing with others influenced her.

Anfal acknowledged that PBL influenced her experience by teaching her how to deal with others and how to gather the information she needed during her internship. She described "searching fast" (L:274) for information. Additionally, PBL enabled Anfal to "do research" (L:313) by herself during her internship and taught her about "some websites" (L:316) to provide information about medications and their effects. Thus, this feeling of being able to gather information may be considered as a skill that Anfal developed from the PBL modules during her studies and carried over to her internship period. This also indicates her acknowledgment that PBL provided guidelines for searching for information:

"...made it [PBL] for us like a guideline, I mean, where we do research, and where we do not do research" (L:318)

All of the above subthemes described Anfal's views about how the PBL course influenced her experience.

Chapter Seven

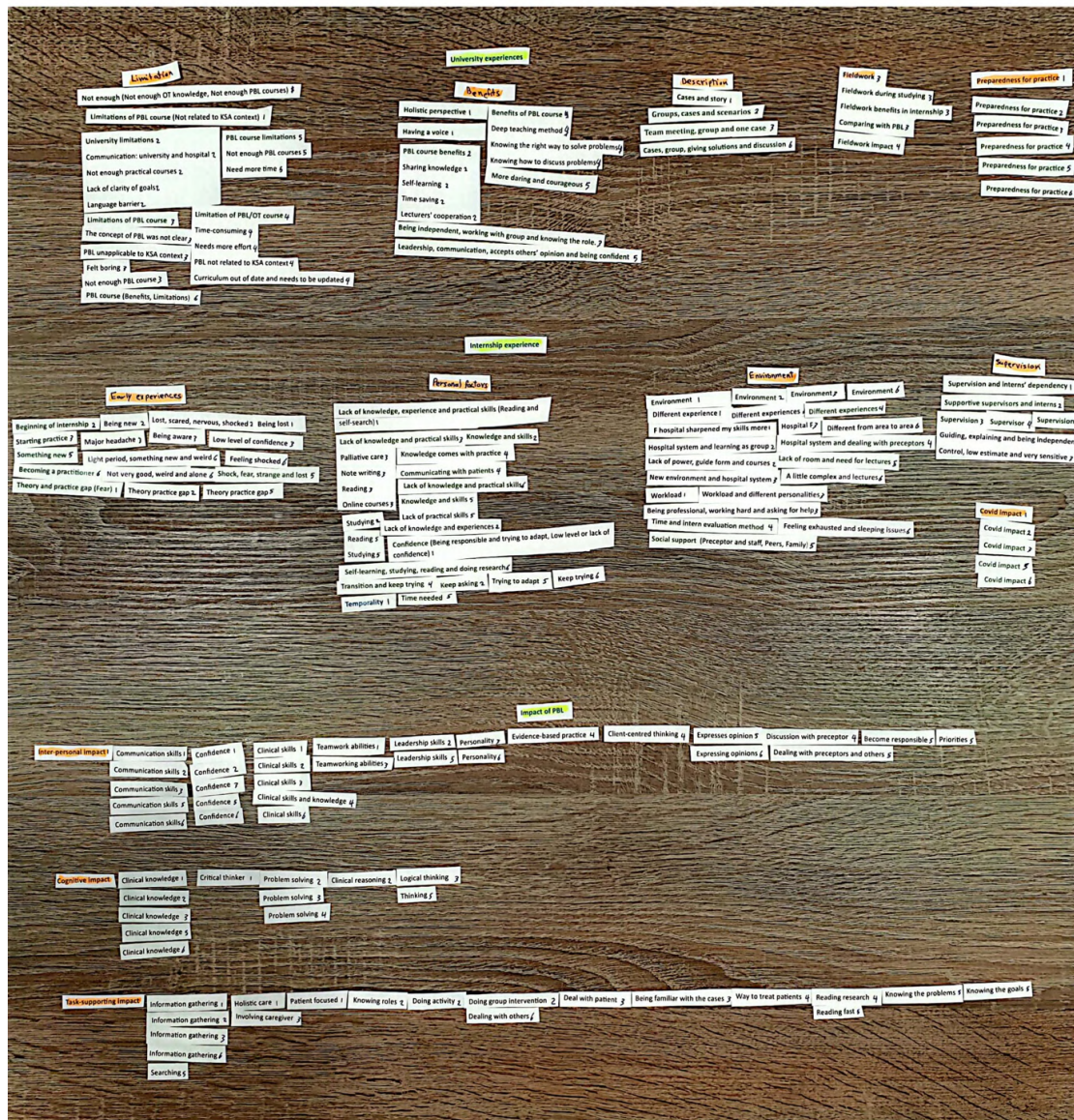
Cross case analysis

7.0 Introduction

The cross-case analysis involved a form of micro-theory development based on ideas from analytical induction in which provisional shadowing ideas were modified by checking each case (Smith et al. 2009). The goal is to produce valid theoretical data for all cases in the dataset. This involves a continuous transition between individual cases and between levels of analysis. This chapter illustrates convergence, divergence, patterning, and individual nuances, as the discussion refers to what participants share while also demonstrating their individuality (Smith et al. 2009).

When conducting the analysis, I printed out the list of written themes so that each theme was on a separate piece of paper, using a large table to move the themes around. This enabled me to explore spatial representations of how emerging themes relate to each other, and this was used to recognise patterns (Smith et al. 2009). Then, I placed all themes that represented parallel or similar understandings together and positioned the contrasting themes next to them; then the super-themes and subthemes were colour-coded (Picture1). The process was further assisted, as Smith et al. (2009) suggested, by using abstraction, polarization, subsumption, contextualization, function, numeration and then integration (explained in the methods chapter).

Picture 1: A picture of patterns across cases shows how the tables and figures developed.



The analysis process resulted in six themes (Figure 12). The university experiences theme describes how OT interns described the PBL course, the limitations of the course and the OT programme, the benefits of the PBL course for individual and group work, whether the PBL course or OT programme prepared them for practice, and finally, how fieldwork impacted on their transition. The early experiences of transition theme had four subthemes which identified OT interns' experiences at the beginning of internship, new

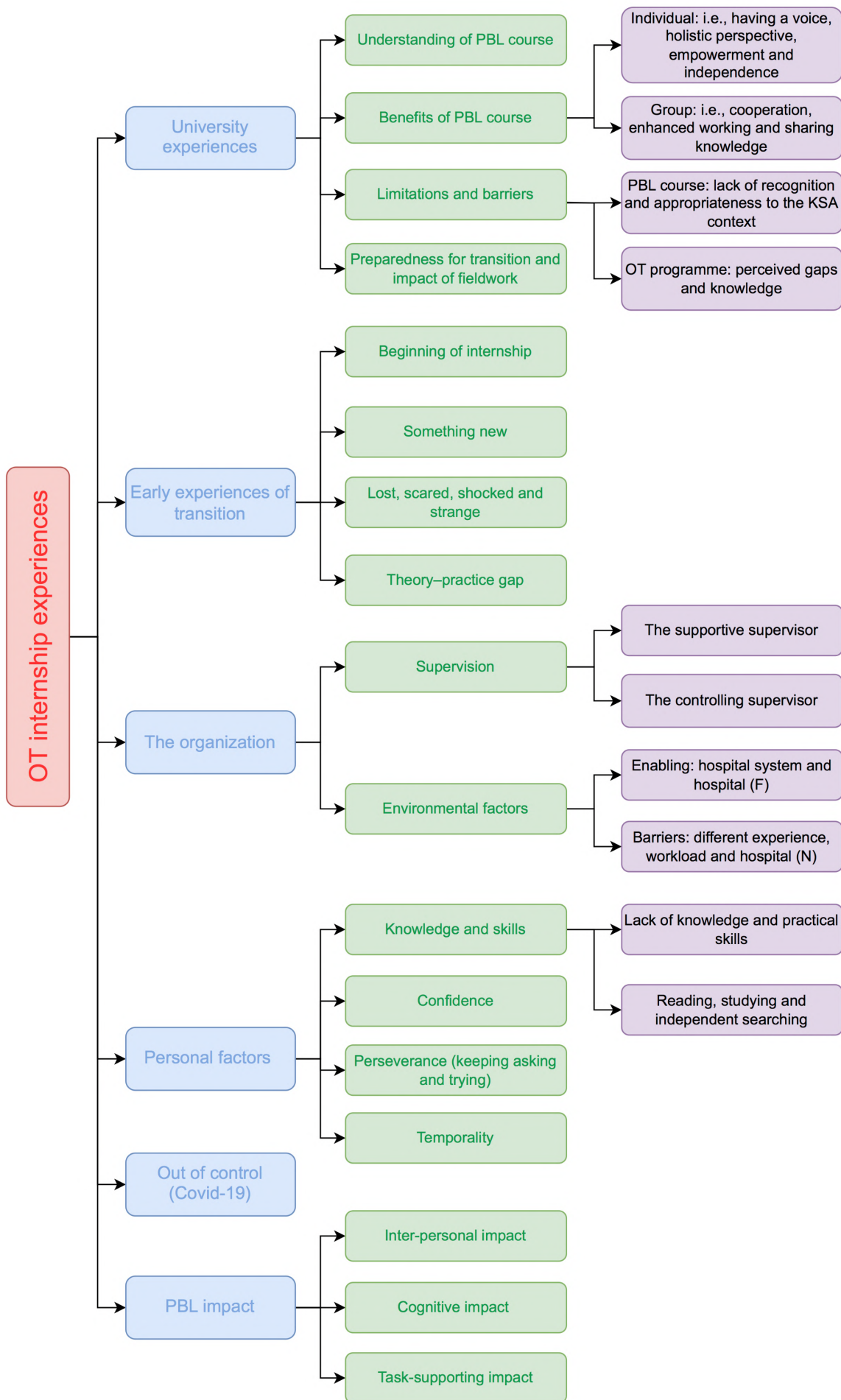
experiences, interns' different feelings about transition, and the challenges of the theory–practice gap.

The organization theme had two subthemes, considering the environmental and supervision factors that impacted on transition. The personal factors theme had four subthemes: knowledge and skills factors, how confidence impacted internship, perseverance, and temporality. The out of control theme talked about how Covid-19 impacted OTs' internship during transition. Finally, the impact of PBL theme contained three subthemes: inter-personal impact, cognitive impact, and task-supporting impact.

It is noteworthy that in cross-case analyses, there are subthemes the focus on the university setting, where the two genders are taught separately, and this has led to different experiences, especially regarding the essence of participants' experience with the university. For example, when participants were asked about PBL, male participants recognized the language but used different terminology to describe PBL. However, female participants had no concept of PBL: even if they had undergone PBL, they did not know that they had used the PBL method. It is also evident from the subthemes that participants talked about the fact that the context of the university shifted between the Australian and the American concept of OT, and that this influenced the themes.

Moreover, participants talked about three separate hospital settings (F, N and T). Hospital F is in a medical city location in Riyadh with a total capacity of 1,200 beds, and treats more than 30,000 inpatients and 500,000 outpatients annually. Hospital N is one of the main hospitals in Riyadh and one of five medical campuses located in KSA funded by the Saudi government and affiliated to the Ministry of Guard. Hospital T is one of the main specialist hospitals and research centres in Riyadh, with a total capacity of 1934 beds across its whole organization (Riyadh and Jeddah). There are similarities and differences in these hospitals', which influenced participants in different ways.

Figure 12: Cross-case OT internship experience



7.1 University experiences

The university experience theme has four subthemes: understanding of the PBL course, benefits of the PBL course (for individual work: having a voice, holistic perspective, empowerment and independence; for group work: cooperation, enhanced working and sharing knowledge), limitations and barriers (for PBL course: a lack of recognition and appropriateness; for OT programme: perceived limitations in practical experience and knowledge), and preparedness for practice and the impact of fieldwork. Themes and subthemes for participants' narratives are presented in Table 9.

Table 9: University experience theme

University Experiences																																							
Participants	Understanding PBL course						Limitations							Benefits of PBL course								Preparedness for practice																	
	Discussion of cases	Story	Groups	Scenarios	Team meetings	Given solutions	PBL Course				OT Programme			For individual						For group work																			
							Not enough PBL course	PBL not related (unapplicable) to KSA context	The concept of PBL was not clear (not named PBL)	PBL felt boring	Time consuming (requires more time)	Needs more effort	Not enough OT knowledge ("missing" "limited")	Communication between university and hospital	Not enough practical courses	Lack of clarity of goals	Language barrier	Curriculum out of date and needs to be updated	Holistic perspective	Having a voice (being heard)	Being independent (Self-learning, Searching by self, Make an effort)			Deep teaching method (take advantage of studying)	Knowing the right way to discuss and solve the problems	More daring and courageous	Leadership skills and taking responsibility	Communication skills (accepts others' opinions)	Being confident	More enjoyable (compared to the traditional method)	Thinking outside the box	Feeling motivation and professional	Cooperation (Lecturers, Students)	Sharing knowledge	Enhanced working with group	Knowing one's role among teams	Time saving		
																																						PBL Course prepared students for practice	OT Programme did not prepare students for practice
Samia																																							
Saad																																							
Marram																																							
Adam																																							
Mohammed																																							
Anfal																																							

7.1.1 Understanding PBL course

One aspect that emerged from cross-cases analyses was that the participants, except for Adam and Mohammed, used different descriptive words to understand or describe PBL. There was actually quite a common theme of participants not using the right terminology to name the PBL part of the program: they called it 'cases', 'groups' and 'scenarios'. This suggests that there was a potential lack of clarity around what PBL was about. There was also a difference between males and females: males used language that might be expected when describing PBL, but females used words that were less relevant to PBL, like 'story', 'team meeting', and meetings that helped to 'give a solution' to problems, which is not language that is normally used to describe PBL. Therefore, there is a sense within the university that PBL was not clearly communicated because participants used language that was not necessary expressed within formal teaching, and there is a sense of further distance among females, as they used language that would not be used within traditional teaching settings, providing unique descriptions.

7.1.2 Benefits of the PBL course

There are two subthemes here summarizing how the PBL process benefits the individual (i.e., having a voice) and group work (i.e., sharing knowledge).

Having a voice, holistic perspective, empowerment and independence

Common to the experiences between participants was that Samia and Anfal felt that the PBL course allowed them to have a voice – that is, the opportunity to be heard – and a holistic perspective, so they felt more empowered in the PBL part of the programme. For example, Samia believed that PBL helped her to find "what helps the cases" (41) and to think more broadly about the person, including psychological aspects. Moreover, three participants acknowledged that being independent was another benefit of the PBL course. Saad and Anfal stated that the PBL course helped them with self-learning, whereas Anfal and Marram felt that it helped them to search for information by themselves and be prepared for lectures.

From more unique experiences, Adam felt that PBL was a deep method of studying and helped him to learn the right way to discuss and solve problems. Mohammed believed PBL courses made him "more daring" (103) and "more courageous" (115), developed his "leadership skills" (108), helped him to "take responsibility" (195) and accept "others' opinions" (116), and improved his "communication skills" (117, 195) while studying; all of which increased his self-confidence. Finally, Anfal felt that PBL was "more enjoyable" (68, 70) than the traditional teaching method, helped her to "think outside the box" (78), and made her feel motivated and "professional" (94).

Cooperation, enhanced working and sharing knowledge

Cooperation and sharing knowledge were common benefits of the PBL course for Saad and Anfal. Both emphasised a positive feeling of cooperation in PBL and a feeling of sharing knowledge, which helped them to correct their understanding and get to the right knowledge; this, they felt, could not be achieved using traditional teaching methods, in which they were passive listeners rather than participants. Additionally, both Saad and Maram noted that the PBL course enhanced their group work. From a more individualized perspective, Maram found that PBL enhanced her understanding about her role within teams and about the roles of others, whereas Saad believed it saved him time during studying.

7.1.3 Limitations and barriers

This theme highlighted the limitation and barriers taken from participants' experiences of the PBL course and the OT programme.

PBL course: lack of recognition and appropriateness to the KSA context

This subtheme found that PBL was insufficiently applied, the case studies were inappropriate to the KSA context, and PBL was a time-consuming process that required more effort. For example, while Maram and Anfal emphasised that the concept of PBL was not clear or was not explicitly referred to by name at the university, they both, in common with Samia and Mohammed, admitted that insufficient PBL was applied during their university studies. However, all

participants, apart from Saad and Mohammed, stated that the PBL cases used were not related or applicable to the KSA context. Thus, whilst the process of PBL was viewed positively, the content was not: participants described how the case studies used did not describe the reality of work in the KSA context, and thus felt that they did not benefit from the PBL course.

Although Saad felt that the PBL course saved time, Mohammed explained that sometimes PBL classes ended without giving the cases their "due right" (70): thus, both Adam and Mohammed felt that the PBL course was a time-consuming process, requiring more "effort" (Adam: 172). Marram described PBL as "*very boring*" (223), which suggested that the way in which PBL was delivered left her feeling disengaged.

OT programme: perceived gaps and knowledge

Limitations here fell into the categories of lack of perceived practical experience, absence of detailed knowledge and/or out-of-date knowledge in course content, limited communication channels between the hospital and university settings, as well as language barriers; and finally, a lack of clarity around expected goals.

For illustration, three participants stated that there were insufficient practical courses in their OT programme, and this affected their level of practical skills at university and during internship. Although Samia believed that there was insufficient OT knowledge in the programme, where knowledge was "*missing*" (207) or "limited" (210) to neuro and ortho, Adam emphasized that the OT curriculum overall was out-of-date (before 2010) and needed to be updated to be more meaningful and appropriate for students. Moreover, only Saad acknowledged that there was a lack of "communication between university and hospital" (163), with feelings of lack of clarity of goals during the university period, and he also faced a language barrier during his studies that sometimes led him to incorrect understandings of certain aspects.

7.1.4 Preparedness for transition and impact of fieldwork

One important aspect of the OT programme is preparing students for practice. However, all participants agreed that the OT programme in general did not do this. Although three participants (Saad, Marram and Anfal) acknowledged that they did not feel that the PBL course prepared them well for practice, all participants emphasised that it prepared them in some areas of practice and improved their transition experience.

Moreover, three participants raised the impact of fieldwork in their internship. Marram believed that fieldwork increased her "confidence" (220) in practice, linked her "practice and theory" (242), shaped her "skills" (243), helped her to be a "good practitioner" (243), and helped her to "learn assessment" (255) and find out about real practice at hospital, and to be "familiar" (363) with the hospital system. Moreover, both Anfal and Adam believed that knowing some supervisors in hospital N from their fieldwork experience helped them in their internships. Indeed, Adam felt that fieldwork helped him to adapt to his internship and prepared him for practice, as he was "going to hospital" (181) and observing therapists, which taught him "how to deal with patients" (187) through "knowing the atmosphere of the hospital" (148), "knowing the therapists" (149), familiarity with OT areas, "knowing the situation in the hospital" (151), knowing "who is my administrator" (152) and knowing "who I belong to" (152).

7.2 Early experiences of transition

The early experiences of transition have four subthemes: beginning of internship; something new; feeling lost, afraid, shocked and strange; and the gap between theory and practice. Subthemes for participants' narratives are presented in Table 10.

Table 10: Early experiences of transition theme

Early experiences of transition															
Participants	Beginning of internship							Something new (new place, new experience, every thing new)	Theory and practice gap	Feeling					
	Lack of experience	Proving oneself	Being aware	OT areas are specialized	Not well good	Light period	Sleeping issues			Being lost	Fear (scared)	Shocked	Very headache	Nervous	Strange \ weird
Samia	■								■	■	■				
Saad	■	■						■	■	■	■	■			
Marram			■					■			■		■		
Adam															
Mohammed				■				■	■	■	■		■		
Anfal					■	■	■	■			■		■	■	

7.2.1 Beginning of internship

Common to the experiences of both Samia and Saad was that during the first month of transition, they realised their lack of experience. Saad felt that the first month was the "most difficult month" (227) and he felt the need to "prove myself" (223) in OT areas. Uniquely, Marram was more aware than others of this transitional period, explaining that she was "still growing" (513) in her specialty during her internship period, and believed that everyone should improve themselves by "development" (351) before starting their internship. Mohammed noticed at the beginning that "some areas are specialized" (164), meaning that each area has unique characteristics in the hospital context, whereas Anfal described the beginning of her internship as a light period, but acknowledged that she had issues with her sleeping and explained that she found her experience at the beginning "not very good" (232).

7.2.2 Something new

A sense of something new was associated with three participants. Saad described his internship by stating that "everything was new" (339) and challenging. Mohammed described that he faced "something new" (204, 241) "inside a new place" (241), "new experience" (242) and "everything [was] new" (242, 425), and similarly, Anfal described the beginning of her internship as something new where she needed to deal with a new environment and new roles within a new context.

7.2.3 Lost, afraid, shocked and strange

The common feeling between Samia, Saad and Mohammed was a sense of being lost and afraid at the beginning of their internship. Feelings of shock were also experienced by three participants (Saad, Mohammed and Anfal), while Marram, Mohammed and Anfal felt that things were strange or weird, as the hospital staff wrote documents by hand and they did not know what to do at first. Uniquely, Marram mentioned a "*major headache*" (310) during the first two weeks of her internship, while Saad felt "nervous" (216) at beginning of his transition, and Anfal felt alone, as she was "without my friends" (254). These

negative feelings may indicate the extent of the challenges OT interns faced when they moved to internship.

7.2.4 Theory–practice gap

With the exception of Adam and Anfal, one of the things that the participants experienced in common in internship was the gap that they perceived between theory and practice. This was perceived as a negative aspect of the transition period. For example, Samia could not apply what she had learned at university in real-life practice (e.g. burn treatment), while Saad explained that things he had studied theoretically could "not be applied in the hospital" (340) and felt that he only had the basic "theoretical knowledge" (173) (e.g. assessments) when he started his internship, and Mohammed found practice "different" (159) from what he had read at university. However, Maram acknowledged that the gap between theory and practice "cannot be covered 100%" (515) during her transition.

7.3 The organization

The organization theme has two subthemes: supervision and environmental factors. Subthemes for participants' narrative are presented in Table 11.

Table 11: The organization theme

		The organization																								
Participants	The supervision									Environment																
	Enabling			Barriers						Enabling						Barriers										
	Helps a lot (correct, explain, discuss, feedback) (support, adapt, keep thing easy, guide) (help to be independent) (broke the line between studying and internship, knows the role) (cooperative) (give advice, give lectures)	Knowing some supervisors in (N) hospital from fieldwork experience	Not enough supervision	Feeling of control from supervisor	Interns' dependency	Different preceptors' perspective/ very sensitive	Low estimate of self	Misunderstanding	Social support (preceptor and staff, peers, family)	F hospital (covers needed knowledge, has clear schedule, plan, structure, improve skills, has good internship programme, has lectures) (treated as staff, education program, weekly log, put goals)	Hospital system	Learning as group	Interns and interns' committee	Asking for help from hospital staff	N hospital (Knowing the environment and others)	Providing lectures	Different experience (structures, times for seeing patients, follow-up patient progress, interventions) (different inpatient-outpatient tasks) (between internship settings) (different patients goals, time of seeing patients, patients note)	Hospital N (number of interns, programme structure) (guide form)	Workload (all work, lots of patients to cover) (feeling exhausted)	Lack of power	Adapting to new environment	Hospital system (a little complex, took time to learn)	Different personalities	Long time spent at the hospital	Interns' evaluation method	Lack of room
Samia																										
Saad																										
Marram																										
Adam																										
Mohammed																										
Anfal																										

7.3.1 Supervision

The 'supervision' subtheme included experiences around difference in the supervisors' attitudes, which ranged from helping and supporting students to adversely controlling students and creating a sense of dependency.

The supportive supervisor

All participants referred to their supervisors (or preceptors) as enabling factors during their transition. For example, Samia acknowledged that her supervisors "would correct me" (268), and that they helped in applying "assessments" (271), "explaining" (344), "discussing" (344) and giving her "feedback". Saad explained that his supervisors supported him, helped him to adapt, "made things very easy" (219) and guided him during his internship. Marram acknowledged that her supervisors helped her by explaining her practice "issues" (444) and encouraged her to be independent and responsible for her patients. Adam said that his supervisors helped him to "break the line between studying and internship" (301) and to "know the role" (233). Mohammed acknowledged that his supervisors "were cooperative" (375) and helped by treating interns as "friends" (372). Furthermore, Anfal's supervisors helped her by giving her "advice" (347), lectures and feedback before she moved to another setting, and knowing some supervisors in hospital N from her fieldwork experience helped with her internship.

The controlling supervisor

Three participants faced supervision issues during their internship. Both Samia and Marram found their supervisors controlling, and thus felt that they were not independent. This led to a sense of interns' dependency, where one intern depends on another to help the supervisor with the cases. Moreover, Samia, uniquely, felt that she had insufficient supervision because too many interns had been assigned to one supervisor. Marram suffered low self-esteem, as her supervisor described her as "just shadowing" (184), whereas Adam referred to supervision problems, describing that despite a "*claim* [misunderstanding]" (324) with his supervisor, he had to stay with that supervisor for two months.

7.3.2 Environmental factors

The environment emerged as a subtheme where participants shared experiences related to the hospital system, to hospitals F, N and T, to workload, and to different experiences at one organization. Thus, the theme of environmental factors can be further divided into 'enabling factors' and 'barriers'.

Enabling factors: hospital system and hospital F

All participants mentioned certain enabling environmental factors during their internship. The common environmental enablers were the hospital system and the environment at hospital F. Familiarity with hospital system was seen as an environmental enabler for three participants. Anfal felt that knowing hospital N's system helped with her transition, whereas both Saad and Adam found that knowing the hospital system made it easier for them to adapt to their internship and overcome transitional challenges. Moreover, both Samia and Marram expressed that hospital F had supported them. Samia believed it provided the knowledge she required, had a clear internship "schedule" (145), "plan" (144), and "structure" (135), fulfilled interns' needs, improved their skills, and had a good programme, providing "two lectures a week" (131), whereas Marram acknowledged they she was treated "like staff" (437), had an "education program" (446), had a "weekly log" (428) and was asked to "set goals" (431).

From a more individualized perspective, Mohammed acknowledged that social support helped him, while Adam found that knowing others in the hospital N environment (from fieldwork) facilitated his transition, and Saad recognized that "learning as a group" (319), "interns" (307) and having an "intern committee" (407) in the hospital improved his experience. Moreover, Anfal acknowledged that hospital T provided lectures "every Thursday" (398), and Marram believed that asking hospital staff for help assisted her during her internship.

Barriers: different experiences, workload and hospital N

All participants expressed some environmental barriers during their internship. Apart from Mohammed, all had faced different experiences during training,

which they considered as environmental barriers. These different experiences arose due to the hospitals themselves (e.g., F and N), hospital structures or policies, times for seeing patients, following-up patient progress, interventions, inpatient-outpatient tasks, internship settings (acute-neuro, orthopaedic, and neurorehabilitation settings), patients' goals, time to see patients and patients' notes.

Common to the experiences of participants in the context of this subtheme is that three participants considered environmental workload as a barrier during their internship, as there were so many patients to be treated. Samia was left on her own with "all the work" (165) from her second week in hospital N; Marram acknowledged that the workload in the inpatient department was high, and Anfal felt "exhausted" (253) by the number of patients she saw. Furthermore, two participants faced challenges related to hospital N's environment: Samia expressed the need for "*a clear programme structure*" (415) and "*reducing the number of interns*", and Saad explained that there was "lack of guide forms" (417) in hospital N to cover the things needed by OT interns. Moreover, two participants considered the hospital system as a barrier: Anfal described hospital T's system as "*a little complex*" (364) and stated that it "took time" (363) to learn it, while Marram explained that not knowing the "system" (474) or how to "access" (478) it affected her transition.

From a more individualized perspective, Saad felt a lack of power in his internship and did not feel like a therapist because of the power imbalance between therapists and students in the hospital environment. Marram faced challenges in adapting to a new environment and dealing with different personalities in the hospitals. Adam found the long hours spent at the hospital challenging and described the evaluation method for interns as "*a little blurry*" (332). Moreover, Mohammed described that there was no "place" (453) or room for interns in some hospitals and did not feel respected as a therapist.

7.4 Personal factors

This theme has four subthemes: knowledge and skills; confidence; perseverance; and temporality. Subthemes for participants' narrative are presented in Table 12.

Table 12: Personal factors theme

Personal factors										
Participants	Knowledge and skills						Keeping asking or trying to adapt	Confidence		Temporality
	Enabling			Barriers				Being confident (being responsible, applying practice from the last three months)	Low level or lack of confidence (not doing anything without the preceptor, not answering patients' questions, not seeing patients alone)	
	Reading	Independent search (doing their own research)	Studying/self-learning	Communicating with patients	Online courses	Lack of knowledge (OT specialty, certain OT assessments) (palliative care) (knowledge comes with practice) (forgot, missing)				
Samia										
Saad										
Marram										
Adam										
Mohammed										
Anfal										

7.4.1 Knowledge and skills

Knowledge and skills were a common subtheme and were described in terms of both lack of knowledge and practical skills; and reading, studying and self-searching.

Lack of knowledge and practical skills

All participants faced challenges either in their knowledge or in practical skills during their internships. While Adam was aware that "knowledge comes with practice" (329), all participants except Mohammed faced some challenges in terms of lack of knowledge. Samia lacked knowledge about the OT "specialty" (220) and certain OT "assessments" (374) related to a specific setting; Marram had insufficient knowledge about OT in palliative care, and Anfal described her knowledge as being "*forgotten*" (236) and "*missing*" (237), and lacked information about "ortho" (238) and "muscles" (239).

Similarly, all participants except Saad and Adam mentioned that they lacked practical skills. Samia felt that her skills were limited in "applied assessments" (255) and was "not accustomed to applying" (252) these skills. Marram found note-writing challenging and realized that she did not know how to write "sub-notes" (365), whereas Mohammed faced challenges regarding "carrying children" (260).

Reading, studying and independent searching

There were three shared enablers among participants regarding knowledge and skill: reading, independent searching and independent learning. Four participants acknowledged that reading helped during their internships, four believed that studying and self-learning improved their transition, and two believed that looking at up-to-date interventions, doing their own research and searching for information enabled them. From an individualized perspective, Adam found that knowing how to "communicate with patients" (222) helped him to adapt during his internship, and Marram reported that attending "lots of online courses" (322) helped her to address her lack of knowledge, particularly during the first two months.

7.4.2 Confidence

Both Samia and Mohammed believed that being confident during internship helped with their transition. Samia argued that being responsible for patients in the internship period made her more confident, and Mohammed emphasised that the work environment helped him to develop more "self-confidence" (374). However, Samia and Marram both struggled with low confidence. Samia described herself as being unable to "do anything without my supervisor" (169) and being unable to answer patients' question due to her low confidence, whereas Marram felt unable to see patients alone and faced some "situations" (213) due to lack of confidence in her initial practice. Confidence would have been enhanced, from Samia's viewpoint, if the university had "covered the practice in the last three months" (408), so that when she moved to practice, she would have "more confidence" (409) when applying assessments or dealing with patients as an intern.

7.4.3 Perseverance (keeping asking and trying)

Except for Marram, all participants stated that keeping asking or trying to adapt helped them during their internship. Saad found continually "asking" (356) and "questions between interns" (309) helpful during his internship. Anfal acknowledged that she did not feel "very tired" (140), as she adapted to internship very fast, whereas Mohammed acknowledged that he "forced" (402) himself to adapt, and Adam explained that he "put pressure" (230) on himself until he adapted.

7.4.4 Temporality

The need for time was common to the experiences of four participants. For example, Saad mentioned that he needed time to gain experience during his internship and Anfal acknowledged that she "took time" (363) to learn the system at hospital T, whereas two participants (Samia and Mohammed) talked about needing time to adapt and recognise improvements in their skills and knowledge.

Samia acknowledged that the skills and knowledge she had learnt in the PBL course influenced her practice after two to three weeks. Similarly, Mohammed felt that it took him "two weeks" (248) to adapt, by which point he was "accepting things more" (247) and "learning fast" (248). However, Samia needed a "long time" (390) – eight months – to adapt to the challenges that she faced, and Mohammed also felt better in the "second period" (257) of his internship (the last five months).

7.5 Out of control (Covid-19)

All participants (except Adam) shared experiences related to the negative impact of Covid-19 on their internship (see Table 13).

Table 13: Out of control theme

Out of control (Covid-19)						
Participants	(Mess) (Started internship late, only attend two days/week)	(Did not know how to control it) (Hospital cannot always control issues related to Covid-19) (Vision was not clear)	Not having lectures in hospital	Lack of protective equipment	Did not feel integrated for the first five months	Forgot how to mingle with people
Samia	■	■				
Saad			■			
Marram	■	■		■		
Adam						
Mohammed	■	■			■	
Anfal						■

Participants shared negative feelings on this issue. Samia described her internship practice experience as a "mess" (107) because of Covid-19, whereas Marram and Mohammed described this period as a challenge, as they started their internships late and sometimes attended for only two days per week. Moreover, three participants felt out of control regarding the Covid-19 issue: Samia explained that she "did not know how to control it" (381), Marram felt the hospital "cannot always control it" (484), and Mohammed described that "*the vision was not clear*" (161) and acknowledged that during the pandemic, "many things have changed" (445).

From a more individualized perspective, Anfal felt she had "forgotten how to mingle with people" (233). Saad acknowledged that Covid affected lectures in hospital, Marram mentioned that "N95 masks were only prescribed for therapists" (158), and not for interns, and Mohammed "did not feel integrated" (139) during the first five months of his internship due to Covid-19.

7.6 PBL Impact

The PBL impact theme has three subthemes: inter-personal impact; cognitive impact; and task-supporting impact. Subthemes from participants' narrative are presented in Table 14.

Table 14: PBL impact theme

Participants		PBL Impact																											
		Inter-personal impact												Cognitive impact						Task-supporting impact									
		Communication and discussion skills		Clinical skills		Teamwork abilities		Confidence		Leadership and personal skills				Clinical knowledge		Critical thinker		Problem solving				Information gathering		Holistic care provider					
Samia	Anfal	Helped with the preceptor when asking and answering, and improved listening ability	Helped in the hospital areas	Helped with staff, peers, nurses, OTs and PTs; helped students to talk well	Did not influence practice	Helped with knowing the right questions to ask, reporting any problems that occur and presenting things for patients	Patient behaviour	Helped to strengthen communication skills and improve them more in practice	Communicating with others, knowing when to answer and when to be silent, knowing when to speak up in meetings and hospital lectures	Thinking about how other teams work (PT)	Feeling more confident (answering the patients' questions) (bold enough)	Express opinion (courage to talk, bold, accepting others' opinions)	Knowing some diseases and their symptoms	Understand problems from an OT perspective	Knowing the main problem (the problems that occurred)	Right way to solve the problems	Clinical reasoning	Logical thinking	Searching for all aspects of patients	Doing research, searching fast, knowing useful websites	Researching for the right answer, or for more accurate answers	Knowing how to ask questions, obtain necessary information, and take history	Knowing the short- and long-term goals	Knowing the goals	Reading information very fast	Knowing the short- and long-term goals	Knowing the goals	Knowing the goals	
Saad	Anfal																												
Marram	Anfal																												
Adam	Anfal																												
Mohammed	Anfal																												

7.6.1 Inter-personal impact

The interpersonal impact emerged as a subtheme wherein participants shared experiences related to the impact of PBL on their internship. This occurred through their communication and discussion skills, clinical skills, teamwork abilities, confidence, leadership and personal skills, applying evidence-based practice, and being client-centred thinkers.

From shared experience, all participants (except Adam) indicated that PBL had affected their communication skills. It improved listening ability and asking and answering questions with preceptor (Samia); helped to talk well with staff, peers, nurses, OTs and PTs (Saad); helped with knowing the right questions to ask and reporting problems (Marram); helped to polish communication skills and improve them in practice (Mohammed); and helped with knowing when to answer and when to be silent in meetings and lectures (Anfal).

Four participants reported that their discussion skills had improved. Samia acknowledged that PBL influenced her practice through improving her discussion skills, such as "*discussing* my cases" (238) in the hospital's weekly meetings. Adam found that it helped in his discussions with his preceptor, especially knowing "what's best for the patient" (282) and "the approach to treatment or the care plan " (281), Mohammed found that PBL helped in "discussion" (188), "following" (189), and "making points" (190) and had given him "more power in discussion" (192), and Anfal acknowledged that it had increased her ability to "discuss" (313) in hospital lectures and participate in "discussions" (280) with hospital teams.

Apart from Mohammed, all participants acknowledged that the clinical skills gained from PBL influenced their practice, and that they were able to apply these clinical skills in the hospital context. Although Marram felt that the PBL clinical skills did not influence her practice, as she already had these skills, she stated that PBL kept them more active and helped her to notice "patient behaviour" (102), which is a clinical skill. Similarly, Samia had no doubt that PBL would keep her "more focused on practice skills" (393) if applied in all courses.

Moreover, two participants felt that PBL had improved their teamwork abilities. Samia found that PBL enabled her to think about how other teams (e.g., PT) might work on the same case, whereas Marram explained that PBL had helped her to "work jointly with members of other teams" (96), such as social workers, primary doctors and nurses.

All participants, with the exception of Adam, felt that PBL improved their confidence during their internships. Saad stated that PBL "increased" (325) his confidence, while Samia acknowledged that her confidence in answering patients' questions had improved, Marram said "there is a kind of confidence in the way you present yourself to your patients" (110) Mohammed felt more confident as a result of being "responsible" (309) for his own cases.

Additionally, two participants found that PBL helped them to express their opinions. PBL gave Mohammed the "courage to talk" (233), helping him to become "*bold*" (303) and "accept others' opinions" (308) during his internship, whereas Anfal voiced her ability to "express my opinion" (206, 217) during her internship and described herself as being "*bold enough*" (212) to ask questions.

Regarding leadership and personal skills, two male participants – Saad and Mohammed – felt that PBL developed their leadership skills during internship. Saad acknowledged that PBL allowed him to develop "leading skills" (90) and to be responsible in the "discussion" (88) sessions in hospital. Mohammed acknowledged that PBL gave "leadership skills to a person" (116), made him feel more confident and "responsible" (309) for cases, and prepared him to "arrange priorities" (212). Similarly, two female participants – Marram and Anfal – expressed that PBL had improved their personality, but did not explain how.

Finally, and from an individualized perspective, Adam stated that PBL helped him to apply "evidence-based practice" (239) and be a "client-centred" (283) thinker. This was through doing things "based on research, not on personal effort" (241), keeping patients at "the centre of the discussion" (287) and being a client-centred thinker.

7.6.2 Cognitive impact

Cognitive impact emerged as a subtheme where participants shared experiences related to clinical knowledge, critical thinking, problem-solving, clinical reasoning and logical thinking, gained from the PBL course, which had impacted their internship.

All participants acknowledged that the clinical knowledge gained from the PBL course influenced their practice; they were able to apply it in the hospital context (except Saad); and they felt that different aspects of clinical knowledge helped them in each of the hospital areas (except Mohammed). Moreover, Anfal confirmed that PBL had increased her clinical knowledge through teaching her about some diseases and their symptoms, and Mohammed acknowledged that PBL provided "new information" (292) and modified his "false information" (293).

Regarding critical thinking, two participants believed that PBL encouraged their critical thinking. Mohammed acknowledged that PBL had influenced his practice by teaching him how to "think" (222) during sessions and helped with "thinking more" (272) in his internship, while Samia believed that the PBL course opened up her thinking and helped her to consider other aspects and pay attention to things that she might not previously have considered, such as family, education or group intervention. This sense of breadth and critical thinking facilitated Samia's identification of things that "caused the problem" (204) and "the effect of the problem" (205), therefore increasing her "critical thinking" (293).

Furthermore, all participants, except Anfal, acknowledged that PBL influenced their experience by helping them to solve problems. Samia, Adam and Mohammed explained that PBL enabled them to identify the main problem, know whether "the problem is correct" (Adam: 108) and pinpoint "the problems that occurred" (Mohammed: 278). Moreover, Marram described that PBL helped her to "know the problem as an OT" (459), and Adam emphasised that PBL helped him to know "the right way to solve problems" (107). However, only Saad believed that PBL improved his clinical reasoning, as "clinical reasoning helped me sometimes" (202), and only Marram talked about her ability to apply "logical thinking" (459) in the hospital context.

7.6.3 Task-supporting impact

The task-supporting impact emerged as a subtheme where participants shared experiences related to how PBL impacted the tasks that they performed during their internship period.

There were three shared experiences among participants, namely information-gathering; dealing with patients, preceptors or others; and reading research. Four participants expressed that PBL influenced their experience by helping them with information-gathering, but in different ways. Samia found that it helped her to "search for all aspects [of patients' cases]" (206) and "read the case in advance" (280). Saad explained that PBL enabled him to search for the "right answer" (88), "more accurate answers" (89), to "take important notes" (101) and to "take others' opinions" (101). Marram found that it taught her "how to take necessary information, how to take history very well, what is the right question to ask" (459-461), and Anfal reported that it helped her to "search fast" (274) for information and "do research" (313) by herself, and directed her to "some websites" (316) to provide information about medications.

There was also a shared sense that PBL helped respondents to know how to deal with patients (Marram), preceptors (Mohammed) and others in hospital (Mohammed and Anfal). Additionally, two participants mentioned that it helped them to read. Adam acknowledged that he had read lots of "research about TBI" (242) and PBL had enabled him to read research involving "properly conducted trials" (257), whereas Mohammed acknowledged that PBL helped him to "read information very fast" (297).

From a more individualized perspective, PBL influenced participants' internships by encouraging them to be holistic, patient-focused care providers (Samia); to know their roles, undertake whole activities in practice and provide group intervention (Saad); to involve caregivers and to be familiar with cases (Marram); to identify both short- and long-term goals (Mohammed); and to understand the way in which to treat patients (Adam).

Chapter Eight

Discussion

8.0 Introduction

The aim of this thesis was to explore the lived experience and meaning-making for SA OTs when they move to practice, as well as understanding whether PBL courses influence interns' practice. More specifically, it sought to explore the lived experiences of SA OTs in internship positions and the enablers and barriers that they faced. I believe that the aims of understanding, interpreting and describing OT interns' experiences were successfully achieved by using IPA, which helps to make sense of OT interns' experiences through the double hermeneutic approach to data analysis.

The previous chapter presented the results of the study, considering the idiographic and shared themes of OT students' internship experiences. In this chapter, I will discuss these shared themes and make sense of them in the context of KSA. In agreement with Smith and Osborn (2015), the aim is not to generalize, but to help provide a structure within which to consider previously presented stories. Thus, this chapter will be presented in three superordinate themes that emerged from the previous chapter and highlight the relationship between the findings and the chronology of OT interns' experiences.

The first theme (Undergraduate period) will discuss the impact of the OT learning stage retrospectively on OT interns' transition, including PBL. The second theme (Internship experiences) will answer the first and second objective of this thesis related to OT students transition experiences, enablers and barriers. The third topic (The impact of PBL) will answer the third thesis objective related to understanding the influence of PBL on OT interns' practice. These sections will be discussed in more detail and placed within the context of the existing literature, either compatibly, in contrast, or as contributions to new knowledge.

8.1 Undergraduate period

Lea and Callaghan (2012) argued that students' understandings and interpretations are restricted by their stages of learning, and their views might be based on a superficial or incomplete understanding of the complex practice environment they seek

to decode. As they go into practice, OT internship students connect those codes and link them to the real practice environment. However, each intern's experience will differ depending on their understanding and interpretation of the practice environment and how it related retrospectively to the undergraduate period. Therefore, this section will discuss the impact of the undergraduate period on OTs' internship experiences, as the current study found that students referred to their university life retrospectively, indicating that it affected their transitional experience. This theme is about how OT interns described the PBL course; limitations of the OT programme and PBL course; benefits of PBL course; preparation for practice and fieldwork impact.

PBL course description

OT interns described the PBL course as involving case discussions, groups, and scenarios. This was interesting, as from my understanding, using different terminology to refer to the PBL course might indicate that the PBL approach was not well known to participants during their studies (for example, both Marram and Anfal emphasised that the concept of PBL was not clearly defined, or that it was not specifically named as PBL at university), or that students and lecturers did not use the term 'PBL' at university and the approach was not made explicit, indicating a faculty issue that requires addressing. It might also have been the case that there were relatively few PBL modules compared to traditional modules (as Samia, Maram, Mohammed and Anfal admitted that there was not enough PBL during their university studies).

Lack of knowledge of the concept of PBL during university might also explain why most of the participants, except for Mohammed and Adam, were unable to remember the PBL courses concept at the beginning of their interviews. This suggests that the experiences of OT students in this study might have conflicted with the key process and essential characteristics of PBL, which stipulate that students need to be informed about the fundamentals of PBL, its meaning, and their individual roles in the process before starting a PBL course (Campbell and Norton 2007). It has been demonstrated that if they are to be effective, PBL sessions should be carefully organized with clear objectives and proper implementation (Ghani et al. 2021; Alhaqwi et al. 2010). Therefore, OT students in this study might have gained less benefit from the benefits of PBL courses because they did not know or apply the characteristics of these

courses before starting their study. Thus, the concept of PBL should be made clear to OT students if it is to be effective and impactful for them.

Limitations of the OT programme and PBL course

New practitioners are often challenged in unexpected ways, but their learning should fit around their environment in order for them to deliver efficient care for patients and service users (Kelly and Thornton 2018). The OT interns in this research were aware of certain limitations in their OT programme (e.g., there were not enough practical courses) and in the PBL courses specifically (e.g., there were not enough PBL courses, and these courses were time-consuming and required more effort than traditional lectures). Therefore, OT interns unanimously agreed that they needed more practice opportunities during their education, and they identified the lack of these opportunities as being a major curricular deficit. More practice in academic curricula is important, as immersion in communities of practice has been recognized as being essential for the improvement of professional skills that are specific to the future workplace (Opoku et al. 2021; McMahan et al. 2016). Moreover, OT interns called for additional PBL in OT programmes because they saw its benefits during their education as will be discussed later. This resonates with the findings of McMahan et al. (2016), who concluded from their study that educators need to provide more PBL to improve students' ability to communicate with their colleagues while also enabling them to develop their problem-solving skills.

What is surprising is that four of the OT interns in the present study perceived that some cases presented during their PBL were not relevant or applicable to the KSA context. For example, Samia thought that PBL did not suit KSA due to the differences in cultures of the PBL cases presented during the university period (which were taken from universities overseas) and the fact that some of the services and procedures involved are not applied in KSA hospitals. Marram mentioned that the hospital context was more flexible (compared to what she had learned in PBL) and that calling the police and visiting patients at home, both of which she had been asked to do as part of her PBL course, were not applicable in the KSA context or in the OT department. This finding was unexpected, and is supported by Adam's comment that case studies were taken from the American Occupational Therapy Association, and Anfal's explanation that the OT curriculum was taken from an American university.

New HCPs experienced feelings of inadequacy, unpreparedness, and doubtfulness due to the gap between academic and practice contexts (Opoku et al. 2021). In line with Lave and Wenger's (1991) situated learning theory and Kolb and Kolb's (2005) experiential learning theory, which is related to context-specific opportunities, OT interns' concerns in this study are valid, and it is essential that PBL scenarios are based on the KSA OT context. Mainly, PBL reflects modern insights in learning that emphasise that learning should be contextual (Noordegraaf-Eelens et al. 2019). Indeed, PBL originated as a response to difficulties with remembering knowledge out of context because students were not applying what they had learned (Hung and Lin 2015; Schmidt 2012). PBL encourages the transfer of knowledge to be more easily applied to the context of relevant situations (Moust et al. 2021). Although the current study found that there was a sense of not belonging to reality and that OT students gained limited benefits from the PBL course in practice, as it was not related to the KSA context, having contextual learning opportunities did seem to be important, as students were well aware that this contextual learning is where future employment opportunities lie (McMahon et al. 2016).

Therefore, the finding in this research might be inconsistent with information processing theory (explained in the background, chapter 1 section 1.4.1), which suggests that context matching will improve memory and subsequent recall of information (Alrahlah 2016; Onyon 2012). Moreover, Patel (2018) suggested that learning should occur in an environment that is similar to that in which the learning will be used, and should involve working through clinical situations that students will encounter as practitioners (Onyon 2012), which is different from the findings of this research. Thus, in light of this difference, it is imperative that universities in KSA assess their approaches to PBL, as this contextual understanding can improve the curriculum so that it is better able to meet the students' needs.

Benefits of PBL course

Albeit the negatives of the PBL courses (e.g., time-consuming, required more effort, not relevant to the KSA context), there were lots of positives during the university period and the students supported the notion of PBL. Some of the interviewees saw

parts of the PBL programme as a means to become more empowered. This was strongly emphasised by two female respondents, as they both felt that the PBL course allowed them to have a voice: that is, the opportunity to be heard. Anfal acknowledged that her view was heard in PBL, and Samia felt that she was not heard or that her views were not particularly valued until she did the PBL course. This finding was unexpected and suggests that until their participation in PBL method, these female interns did not feel valued, especially from their traditional education method. Therefore, this feeling of being heard might give them the ability to express their opinions and discuss their perspectives in PBL group settings. The following quotes are examples of OT interns' comments which have been provided to illustrate this theme:

... my answer was different from someone else's [in PBL], my view was different from someone else's, it gave me new ideas, everyone states their point of view, so I have a complete expansion of this case... (Samia: 197-200)

... everyone shares what they know ... I have an opinion about it... (Anfal: 50, 69)

Another unanticipated finding was from the male perspective, where Mohammed believed PBL courses made him “*more daring*” (103), “*more courageous*” (115), developed his “*leadership skills*” (108), and enabled him to “*take responsibility*” (195). Lewis (2018) stated that anecdotal evidence suggests that small teams that focus on tasks within larger departments can foster a heightened sense of accountability and responsibility in team members. This appeared to be the case for one participant in this study, who used language such as “*daring*” and “*courage*” in relation to males' feelings in Saudi culture. Moreover, it seems possible that the development of leadership skills and responsibility during the study had a value from Mohammed's male perspective, especially since the PBL courses were taken with a male group and he was distinguishing himself among other males in terms of these qualities and skills during the courses.

OT interns perceived that PBL allowed Saudi OT students to develop a holistic perspective about their cases and to become independent through self-learning and searching for information by themselves. These findings are consistent with Knowles'

(1984) concept of andragogy, which assumes that adults are independent and self-directing, and with the essential characteristics of PBL, whose process requires students to work independently to investigate the problems they have identified, review new knowledge, and reflect on what it means to the case (Bridges et al. 2012; Campbell and Norton 2009). Applying PBL can focus students on independent learning and group work (Moust et al. 2021), especially in the context of this research, as OT students in KSA are often taught in the traditional way; which means that they noticed the benefits of group education and independent learning even if they not knowing they were doing PBL.

The theory of student interactions and small-group collaboration in PBL is consistent with the results of this study, where OT students found that PBL helped their cooperation and enhanced their ability to work together and share knowledge while studying. Cooperation and interaction among students are integral parts of PBL that encourage cognitive conflict (prior knowledge and scientific views) among students (Alrahlah 2016; Onyon 2012). These findings could not have been achieved using traditional teaching methods, in which students are passive listeners rather than participants, and seem to be in competition with each other rather than cooperating and sharing knowledge as in PBL (Bo et al. 2022).

Preparation for practice and fieldwork impact

The current study found that all of the participating SA OT students agreed that the OT programme in general did not prepare them for practice. This finding is consistent with other OT studies that found that recent OT graduates felt inadequately prepared and professionally incompetent in some practice elements (Opoku et al. 2022; Glenn and Gilbert-Hunt 2012; Robertson and Griffiths 2009; Hodgetts et al. 2007; Toal-Sullivan 2006). This may be related to the university's curriculum, as relatively recent study has found that OT graduates made negative comments about their curriculum indicating inadequate practice preparation (Krishnagiri et al. 2017). Furthermore, it might be related to a mismatch between OTs' education and workplace expectations, where novices OT faced tension in early practice due to this mismatch (Jones et al. 2023). Indeed, feeling inadequately prepared seems to result in feeling vulnerable and fearful of taking on responsibilities because of fear of making mistakes (Nour and

Williams 2019; O'Shea and Kelly 2007), as there were some examples of this throughout the interviews.

Moreover, three OT interns observed a positive impact of the fieldwork (which is one module of the OT curriculum) in preparing them for the internship period. For example, they mentioned that it linked “practice and theory” and helped them to be “familiar with the hospital system” (Marram: 242, 255, 363), as well as teaching them “how to deal with patients” and “knowing the atmosphere of the hospital” (Adam: 187, 148). Therefore, this finding agrees with previous OT research which showed that fieldwork was generally beneficial in preparing OT graduates for practice (Naidoo et al. 2014; Doherty et al. 2009; Hodgetts et al. 2007). In particular, the provision of efficient, effective, and high-quality learning practices is considered important for patients and staff (O'Keefe et al. 2017; Barker et al. 2011). Thus, the fieldwork model in the KSA OT curriculum is viewed as making interns better prepared for practice in the internship period, as fieldwork practice learning provides real-world experience in a dynamic and complex clinical setting.

It is also interesting to note that all six participants in this study stated that the PBL course prepared them in some areas of practice, but three participants (Saad, Marram and Anfal) did not feel that this course had prepared them well for practice. A possible explanation for this might be that the actual cases used in PBL differed from the reality that they faced or were not applicable in the KSA context, as explained earlier. However, these three participants acknowledged within the interviews that PBL had helped them in some respects. It had helped Saad with communication, problem-solving, clinical reasoning and improved leadership skills in practice. Moreover, PBL helped Marram to learn how to discuss cases in practice and identify the issues that other team members needed to know, whereas Anfal acknowledged that PBL had helped her to learn how to discuss cases, express her opinion, and answer questions in practice. These acknowledgments explain how PBL might have prepared OT interns for practice, even if these three participants did not feel that the course had done so. The impact of PBL in internships will be explained in detail in the final part of this discussion.

Summary

This section has discussed how the undergraduate period impacted OT interns' experience. I discussed how OT interns described the PBL course, emphasizing that the concept and characteristics of PBL should be made clear to OT students if it is to be effective and impactful for them. Moreover, this section discussed certain limitations of the OT programme that impacted OT interns, including the point that they needed more practice opportunities and PBL courses during their education to improve their professional skills that would be relevant to the future workplace. This section also discussed the importance of ensuring that the PBL scenarios were relevant and applicable to the KSA context, as such contextual learning can facilitate future practice opportunities for OT interns. Additionally, I discussed some of the benefits of the PBL process during university, including feeling more empowered and being heard, becoming more daring and courageous, developing leadership skills, taking responsibility, having a holistic perspective and being independent through self-learning and searching for information, helping with cooperation, enhanced working, and sharing knowledge while studying. Finally, I discussed how SA OT interns felt that the OT programme in general did not prepare them for practice, although the PBL course did prepare them for some areas of practice, and that they noticed a positive impact of the fieldwork during their internships.

8.2 Internship experiences

This section will discuss the experience of SA OT students in the internship period. It is clear that becoming an internship student represents an important transition for Saudi OT practitioners, when several significant personal and social changes coincide. The conception of self-reconstruction during the internship was apparent amongst the OT interns as they became independent OT practitioners. This part will discuss OT interns' internship experiences, including their early experiences of transition, the organization (supervision and environmental factors), personal factors (knowledge and skills, confidence, asking questions, trying to adapt, and the need for time) and the negative impact of Covid-19 on OT interns in KSA.

8.2.1 Early experiences of transition

The early experiences of transition for new HCPs have been described as complex and a period of great stress (Opoku et al. 2021). The OT literature has highlighted the importance of previous experience as a factor that improved new practitioners' confidence and ability to learn in a new workplace (Opoku et al. 2021; Naidoo et al. 2014; Gray et al. 2012; Seah et al. 2011). The current study found that OT students referred to difficulties in their experience at the beginning of their internships, when they became aware of their lack of experience. For example, Saad felt that the first month was the "*most difficult month*" (227) due to his lack of experience, and he felt the need to "*prove myself*" (223) in order to become an OT practitioner.

A study have found that deficiencies in practice for new OTs are strongly associated with inadequate practical and clinical exposure in undergraduate education (Uys et al. 2019). This was evident amongst the OT interns in this study as they encountered a new professional context that was different from their previous experiences. However, Marram was more aware than the other respondents of this transitional period, explaining that she was "*still growing*" (513) in her specialty during her internship, despite her previous training experience, and believed that everyone should improve themselves before starting their internship. Thus, it is not surprising that OT interns who had previous experience (e.g., clinical training, fieldwork, summer training) reported more positive internship experiences, indicating the importance of previous experience in helping to make the transition period less challenging for new interns.

Throughout the interviews, three participants gave examples of feeling a sense of something new at the beginning of internship (a new place, new experiences, and everything being new). For example, Anfal described the beginning of her internship as something new where she needed to deal with a new environment and new roles within a new context, and Saad's description emphasised that the first month was difficult for him, as he needed to deal with a new environment. However, even if a new experience or place is uncomfortable, reflecting and making sense of the experience will lead new practitioners to learn and recover (Murray et al. 2020). Indeed, new practitioners certainly need clarification about the new professional behaviour expected of them from their new environment (Kelly and Thornton 2018).

Consequently, OT interns needed to adapt and learn to deal with the new environment, new roles, and the new internship context.

Four OT interns perceived that the theory–practice gap was another challenge at the beginning of their internships. This finding concurs with those observed in earlier studies where newly qualified OTs faced challenges with applying their theoretical knowledge to clinical practice (Opoku et al. 2022; Naidoo et al. 2014; Hodgetts et al. 2007; Morley et al. 2007; Toal-Sullivan 2006). Similarly, numerous HCP studies have confirmed the contrast between what was learnt in the classroom and the performance expectations in real practice (Opoku et al., 2021, 2022; Labrague et al. 2019; Nour and Williams 2019; Uys et al. 2019).

This sense of a gap between theory and practice may have a negative impact on the transition period for OT interns. For that reason, many OT curricula have applied placement and fieldwork modules to reduce the theory–practice gap. Others have previously reported that the theory–practice gap seems to cause a mismatch between new HCPs’ role expectations and what is truly practised in the field, leading to role confusion (Nour and Williams 2019; Melman et al. 2016). Thus, it is necessary to increase clinical and practical experiences during education to support new HCPs in the process of closing the gap between theory and practice. Surprisingly, Maram acknowledged that the gap between theory and practice “*cannot be covered 100%*” (515) during internship, indicating that new OT interns need to be aware of this gap and seek to close it during the internship period.

Three OT interns used emotive words such as ‘lost’, ‘scared’, ‘shocked’, and ‘weird’ to describe their feelings during their early experiences of transition. In agreement with prior OT studies on the transition period, feeling shocked or stressed at the beginning of transition may be attributed to the gap between theory and practice (Opoku et al. 2022; Hodgetts et al. 2007), lack of confidence in their knowledge (Seah et al. 2011), or unexpected revelations (Liddiard et al. 2017). Due to the lack of realistic expectations of practice, practice shock or feeling lost during transition is one of the problems facing newly graduated OTs (Turpin et al. 2021; Murray et al. 2020; McCombie and Antanavage 2017; Seah et al. 2011; Toal-Sullivan 2006). Other new HCPs have also been shown to experience high levels of stress beyond their

expectations, particularly in the first few months of transition into practice, along with anxiety and nervousness upon entering the world of practice which impact their transition (Labrague et al. 2019; Nour and Williams 2019; Uys et al. 2019; Melman et al. 2016; Reynolds et al. 2014; Tastan et al. 2013; Black et al. 2010; Brennan et al. 2010).

In the context of this research finding, these feelings arose when new OT interns found themselves having to deal with a new environment and new roles within an unfamiliar context, faced situations that were different from what they had studied, lacked previous experience and faced a theory-practice gap. Although the negative and highly emotive feelings expressed above indicate the extent of the challenges that the OT interns faced when they moved to internship, it is fundamental to maintain a positive interpretation of the practice to ensure healthy engagement and longevity in the interns' future career (Westcott 2018). Therefore, new OTs might feel shocked, nervous, or lost, despite their understanding of the changing nature of the new workplace, because they will face many issues that they had not anticipated in their practice, particularly when they start a new position in an unfamiliar area of practice. However, even if these new experiences are uncomfortable for OT interns, adapting and maintaining a positive view will enable them to gain new experiences and recover from these negative feelings.

8.2.2 The Organization

This section will discuss the importance of supervision and the environmental factors that affected OT interns during their transition.

The supervision

The current study found that OT interns referred to their supervision in terms of differences in the supervisors' attitudes, which ranged from helping and supporting students in different ways to adversely controlling students and creating a sense of dependency. The OT interns in KSA context are not qualified and must have supervision to develop professional and organisational capabilities, provide feedback, help in achieving their learning goals and general support.

All OT interns referred to their supervisors as supportive during their internship period. Basically, supervision was considered to be the most important element in the process of transition, and many OT studies have proposed supervision as a means to provide formal and informal support for new practitioners. It is critical in many areas of practice in order to maximize the chances of a smooth and successful transition (Moir et al. 2022; Turpin et al. 2021; Murray et al. 2020; Liddyard et al. 2017; McCombie and Antanavage 2017; Fitzgerald et al. 2015; Gray et al. 2012; Seah et al. 2011; Doherty et al. 2009; Robertson and Griffiths 2009; Hodgetts et al. 2007; Morley et al. 2007; Toal-Sullivan 2006).

In this study, OT interns identified supervisors as supportive and cooperative (Mohammed) and stated that they had helped them to adapt and guided them during the internship (Saad), encouraged them to be independent and responsible for patients (Marram) and knew the OT interns' role in internship (Adam). This resonates with the findings of Evans and Choucri (2012), who concluded from their study that excellent supervision in the clinical area was key in enabling this transition to occur smoothly. Therefore, supervisors have a key role in the development of new practitioners in terms of practice, skills, confidence-building and professionalism (Abey and Cole 2018; Liddyard et al. 2017). Moreover, Strong (2018) argued that unqualified practitioners should not be practising without supervision, and this applies to the internship context in KSA, where OT students are not qualified and must have supervision. Thus, supervision during internship in KSA is important and should not be underestimated, especially by experienced OTs in the same profession.

OT interns perceived that getting feedback from supervisors was important during their internship. The following quotes are just some examples of how OT interns explained the way supervisors helped through feedback:

...were there and would correct me. (Samia: 268)

...for the supervisor, if he explaining to me or discussing with me the things that I do, right or wrong, he gives me a feedback, this helps a lot. (Samia: 344)

... all those I was with were cooperative: for example, they advised me at the time... (Anfal: 347)

This finding was similar to previous studies where supervision feedback was considered a vital component of a successful transition, as it reinforced the students' confidence, reduced their initial anxiety, helped and encouraged them to reflect on practice, contributed to the experience of learning, provided knowledge, and enlightened intervention decisions (Moir et al. 2022; Opoku et al. 2022; Morley 2006; Lee and Mackenzie 2003). Indeed, OT interns felt empowered to deal with negative feedback if it was presented constructively. These results are consistent with those of other studies and suggest that OTs considered the balance of positive and negative feedback to be vital, especially in building insight (Naidoo et al. 2014; Rodger et al. 2011). Thus, supervision feedback is one of the factors that helped new OTs in transitions, and in agreement with Kelly and Thornton (2018), supervision is a major support mechanism in the workplace to allow new practitioners to obtain feedback about their professional behaviour and its impact. If newer OTs participate in these opportunities, they are likely to obtain significant benefit from them (Kelly and Thornton 2018).

Many prior OT studies have noted the issues of insufficient or absent supervision as a major difficulty in the transition process, which resulted in weakness of professional identity and role uncertainty, affected new OTs' professional development, and was barrier to a smooth transition (Hardy et al. 2021; Murray et al. 2020; Miyamoto et al. 2019; McCombie and Antanavage 2017; Naidoo et al. 2014; Morley 2009, 2007; Robertson and Griffiths 2009; Smith and Pilling 2008; Lloyd et al. 2007). However, the findings of the current study do not support the previous research, as only one participant (Samia) felt that she had insufficient supervision: in her case, this was because too many interns had been assigned to one supervisor. Indeed, OT interns must be supervised, but a possible explanation for these results may be that OT is considered to be a new specialty in healthcare and the lack of qualified supervisors for OT therapists in some areas of practice might mean that too many interns are assigned to one supervisor. Therefore, new OT interns in KSA supposed to have individual supervision if they are to get the most out of supervision.

Recent OT studies highlighted the challenges with working with supervisors as a critical factor that made transition more challenging (Hardy et al. 2021; Murray et al. 2020). One unanticipated finding in this study was related to supervision challenges, as two OT interns (Samia and Marram) faced different supervisors' perspectives and reported that their supervisors were very sensitive and controlling, and thus felt that they were not able to act independently during their internships. However, OT students, who are not yet qualified, are a subset of the healthcare workforce working with service users under supervision, and they thus need clarification from their supervisors about the professional behaviour expected of them. Moreover, a sense of interns' dependency was found in this research, such that one intern depends on another to help the supervisor with the cases. This might affect quality of care and patient safety, which is of primary importance to the supervisors and service users, with the needs of the interns coming second (Abey and Cole 2018). Thus, supervision seems to be critical in the early stages of professional development, not only to bridge the gap between theory and practice, but also to influence the next generation of practitioners by introducing students to professional work and setting high standards of practice.

The environmental factors

Some interesting results related to the internship environment appeared in this research. OT interns identified that familiarity with the hospital system and environment was perceived as facilitating adaptation to internship and overcoming transitional challenges. In contrast, the hospital system could also be a barrier: in the present study, Hospital T's system was reported to be somewhat complex and interns took time to become familiar with it because they did not know the system. Similarly, previous studies reported that among the challenges faced by new HCPs were those related to the complexity of workplace systems, which impacted on OTs' transition into practice (Opoku et al. 2022, 2021; Moores and Fitzgerald 2016).

While many studies in the literature on OTs have cited support and peer learning as beneficial to new OT graduates, with chats with peers enabling them to seek intervention ideas (Mori et al. 2022; Opoku et al. 2022; Turpin et al. 2021; Naidoo et al. 2014; Seah et al. 2011; Morley 2009; Morley et al. 2007; Toal-Sullivan 2006), one

of the OT interns in this study found that social support (staff, peers, family) helped in internship. Indeed, such contacts with staff or peer groups who share an interest in the practice can be supportive, confirming and enhancing the resilience of practitioners who may work in isolation (Westcott 2018).

In many of the interviews, OT interns acknowledged that Hospital F's environment was more supportive for OT interns than the other hospitals. In contrast, Hospital N's environment was in need of a clear programme structure and guidance forms for interns to cover the information they need. This finding was unexpected, as OT interns expected to face similar experiences across most their internship environments; however, OT interns also suggested that hospital F provided the knowledge that they needed; had a clear internship programme, plan, and structure; provided lectures and an education programme during internship; treated OT interns as staff; and had established an intern committee and weekly log to follow OT interns' goals during their internship.

A study has shown good clinical learning environment is perceived as an important factor in learning (Alhaqwi et al. 2010). This finding confirms the association between interns and internship programmes, as early studies found that regular meetings with newly graduated OTs helped with their transition (Hummell and Koelmeyer 1999). Thus, this finding also indicates the importance of the internship organization in the practice environment and how the responsible organization's concern for interns can be reflected in the interns' transition experience.

On the issue of workload, half of the OT interns considered the environmental workload as a barrier during their internship. Workload, including high patient loads, especially in the first months, has been found to be challenging for new OTs in numerous studies (Hardy et al. 2021; Turpin et al. 2021; Murray et al. 2020; Naidoo et al. 2014; Nayar et al. 2013; Gray et al. 2012; Morley 2009; Smith and Pilling 2008; Lloyd et al. 2007; Toal-Sullivan 2006). The workload in this study was linked to high patient loads that needed to be covered and the interns in some cases being left to deal with all the work alone from the second week. For example, Anfal used the emotive word "exhausted" (253) to describe her feelings regarding the number of patients she saw. This resonates with the findings of Labrague et al. (2019), who

argued that novice HCPs were expected to deal with complex procedures and cases considered unreasonably beyond their capabilities, while other studies also found that novice HCPs experienced overwhelming and complex workloads (Opoku et al. 2021; Labrague et al. 2019; Nour and Williams 2019; Tastan et al. 2013). This may cause new HCPs (including OT interns) either to work under pressure or to work overtime in order to fulfil their responsibilities, ultimately leading to burnout.

Turpin et al. (2021) argued that maintaining the same workload over a long period of time enables new graduates to develop the level of experience required to use the reasoning strategies of advanced beginners; however, hospital staff are already at risk from burnout and stress (Clouston 2014; Chang et al. 2005). Indeed, Westcott (2018) argued that unexpected levels of stress may mean that exhaustion or burnout will become a real risk, and OTs' views of their role might become negative and they might struggle to find enjoyment and satisfaction in their work (Clouston 2015). Moreover, an early OT study described the intensity and speed of workload requirements as being like paddling through fog where the vision of the future is unclear (Seah et al. 2011). Thus, this may affect the new OT interns, as their high workload might result in the management of a full case burden or all patients, with difficulties in finding enjoyment or satisfaction in their internship, and leave them with limited time for the required guidance, co-working and support that they require, which might result in their vision of the future becoming unclear.

Most of the OT interns in this study regarded the different experiences they faced during their internship as environmental barriers. There are several possible explanations for this result, as these different experiences arose due to different hospitals (e.g., Hospitals F, N, and T), hospital structures or policies, different internship settings (e.g., acute-neuro, orthopaedic), and methods of following up patients' progress and keeping track of patients' notes, interventions and goals. Thus, this feeling of difference explains why OT interns' transition was challenging, especially while moving from one hospital or OT setting to another. However, it is normal that each hospital in KSA has its own structures, policies, intern programme, and patient progress plans. Thus, orientation before starting in a new hospital or OT setting might be helpful for OT interns who face environmental difficulties or unfamiliar experiences.

Many studies in the OT literature have highlighted the importance of orientation programmes and ensuring new OT students' understanding of the new environment and procedures, especially in the early stages of their practice (Opoku et al. 2021; Turpin et al. 2021). While new HCPs who do not receive sufficient orientation have been shown to face difficulties within their transition to practice (Uys et al. 2019; Brennan et al. 2010), those who receive sufficient orientation have reported doing well during their transition (Melman et al. 2016; Phillips et al. 2014; Tastan et al. 2013; Toal-Sullivan 2006). This orientation provided substantial support for new graduates, improved their feelings of confidence, provided workplace information (health district, caseload, hospital), tours, and policy and procedure manuals, which helped new OTs to navigate their transition (Moir et al. 2022; Hardy et al. 2021; Turpin et al. 2021; Rodger et al. 2011).

Moreover, Whitcombe (2018a) argued that healthcare practitioners need to be aware of the legal and political aspects of healthcare to ensure that they practice safely and efficaciously in the hospital environment. Consequently, orientation programmes should be comprehensive to meet OT interns' needs, because the orientation process clarifies expectations and reduces graduates' anxiety, as well as ensuring that OT interns are aware of the legal and political aspect of their practice and giving them an idea of the tasks to be undertaken and the progress expected.

8.2.3 Personal factors

Most of the OT interns who participated in the present study experienced a lack of either knowledge or practical skills during their internship. This result is expected, as OT interns reported feeling that the OT programme does not cover enough OT knowledge, and does not provide sufficient practical courses, and thus does not prepare them well for practice. Essentially, perceived gaps in knowledge or skills were seen as a barrier in many OT studies (Moir et al. 2022; Opoku et al. 2022; Hardy et al. 2021; Murray et al. 2020; Miyamoto et al. 2019; Naidoo et al. 2017; Nayar et al. 2013; Seah et al. 2011; Smith and Pilling 2008). Over two decades ago, De Bellis et al. (2001) emphasized that the knowledge nurses gained from their undergraduate education was not applicable to their practice, whereas more recent studies suggest

that the discrepancy between education and practice can often lead to reality shock in the practice setting (Abualrub et al. 2018).

It has been recognized that new HCPs will become aware of deficits in their skills and knowledge in real practice (Opoku et al. 2021). Robertson and Griffiths (2009) argued that gaps in practical knowledge and skills are the main issues that new OT graduates face: they will have learnt some skills at university, but some issues cannot be fully taught in educational settings. Indeed, many of the skills that are used in healthcare require a blend of cognitive (practical knowledge) and physical aspects (skills) (Strong 2018). This can be applied in the real practice environment (internship) to link the knowledge gained during study to the reality of practice while refining the skills required during practice.

In the context of this research, insufficient knowledge was evident in some OT specialties and certain OT assessments related to specific settings (e.g., palliative care, information about orthopaedics and muscles), whereas insufficient practical skills were linked to applied assessments, note-writing, skill of carrying children during sessions, and communication with patients. Some of these findings support previous studies in which new OTs were found to lack proficiency in report-writing and gathering client data (Adam et al. 2012), and to be low in confidence about conducting new assessments (Glenn and Gilbert-Hunt 2012; Lloyd et al. 2007). Therefore, it is advisable for universities in KSA to reassess OT programmes to reduce the gaps or deficiencies that OT intern students face in terms of skills and knowledge.

OT interns also identified three shared enablers among participants regarding knowledge and skills: reading, independent searching, and independent learning. This finding confirms a recent OT study in which additional reading and learning were shown to be essential for successful transition into practice (Opoku et al. 2022). In fact, the PBL modules might help OT interns to develop this feeling of support from these enabling factors or skills carry them over to the internship. Arguably PBL is better for developing research, reasoning and team working skills than for accumulating knowledge, where it has been found that independent learning skills acquired from PBL are continued in dental hygiene practice (Cheng 2009), and the independent nature of research in the PBL methodology allowed physiotherapists to learn new

things in practice (Wormley et al. 2019). Additionally, PBL has been shown to promote a sense of responsibility for nurses and enable them to become more independent to determine the most appropriate care by keeping their knowledge up to date (Consul and Medina 2014), and they have also been shown to be able to realize their independence through self-directed learning and abilities in their current practice, which they viewed as skills learned from the PBL approach (Chikotas 2009). Thus, PBL could support transition to practice where reading, independent searching and learning might be viewed as outcomes of PBL that enable OT interns to search for answers through various forms of resources and transfer these skills to their current internship practices.

Another result that concurs with those observed in earlier studies relates to level of confidence. Two OT interns believed that being confident during internship helped with their transition. Similarly, the OT literature has identified confidence as a strategy in service delivery, and has linked it to successful transitions that help new OTs to be seen as capable and competent (Moir et al. 2022; McCombie and Antanavage 2017; Seah et al. 2011). Indeed, learning through repeated practice and learning from their own mistakes is considered to be an essential step towards confidence improvement (Opoku et al. 2022; Murray et al. 2020). This may apply to OT interns in the context of this research, as they work in this role for a full year, learning from their mistakes through supervision. Therefore, the work environment and supervision are considered vital to help interns to develop more self-confidence during their internship.

However, this study also found that some OT interns struggled with low levels of confidence during their internship. This finding further supports previous studies in which new OTs experienced low confidence when they moved to practice, which made the transition difficult, especially at first (Opoku et al. 2022; Miyamoto et al. 2019; Robertson and Griffiths 2009; Smith and Pilling 2008; Hodgetts et al. 2007). Indeed, OT interns described their low levels of confidence in terms of being unable to do anything without their supervisor, unable to answer patients' questions, and unable to see patients alone. Thus, a low level of confidence might be related to OT interns' lack of adequate knowledge or practical skills when they move to their internship positions, and they need supervision and acquisition of practical skills and knowledge to increase their confidence.

Accordingly, this result supports early OT studies which found that a lack of knowledge or skills during the transition may affect the confidence of new practitioners (Morley 2009; Robertson and Griffiths 2009; Hodgetts et al. 2007; Lloyd et al. 2007). In agreement with Opoku's et al. (2022) and Toal-Sullivan's (2006) findings, one factors contributing to successful transition for OT interns was confidence in their skills and knowledge. Furthermore, new OTs' confidence was improved by having opportunities to consolidate their learning through repeated practice (Murray et al. 2020), and learning from their own mistakes was considered an essential step towards confidence improvement (Opoku et al. 2022). Therefore, confidence would have been enhanced, from one OT intern's viewpoint, if the university had covered the practice in the last three months, so that when they moved to practice, they would have more confidence when applying assessments or dealing with patients as interns.

Most of the OT interns perceived that continuing to ask questions and trying to adapt during their internship were helpful skills. Continuing to ask questions may be one of the advantages transferred from the PBL to the practice environment, as the OT interns felt as confident in asking questions as they did in the PBL course. Moreover, Mohammed and Adam explained their views of trying to adapt by using the phrases "*forced myself*" (Mohammed: 402) and "*put pressure on myself*" (Adam: 230) to describe their efforts to adapt to their internships. Indeed, regularly asking questions has been emphasized as a coping strategy to mitigate the challenges of transition (Opoku et al. 2021). Therefore, new OT interns may need to continue to ask their supervisors or hospital staff if they need assistance, especially in the initial period of the transition, considering the need and attempt to adapt to the new practice environment.

In this study, need for time (temporality) was found to be common to the experiences of four of the six participating OT interns. The following quotes are just some examples of how OT interns expressed this when describing their need for time to learn about the hospital system, to gain experience, to adapt, and to recognize their improvements in skills and knowledge:

I felt that with time, not directly [referring to improvements in skills and knowledge] (Samia: 290)

...then, with time, we started to apply it [practical skills], I became more comfortable, and my skill developed more... (Mohammed: 261-262)

... with time, I started to adapt more and more... (Mohammed: 397)

... we took time to learn it [hospital system]... (Anfal: 363)

However, some OTs felt that it took them two to three weeks to adapt, whereas Samia needed more time (eight months) to adapt to the challenges that she faced in internship, and Mohammed also felt better in the second period of his internship (the last five months). This seems to be the point in time at which Samia and Mohammed realized that they had enough experience to be confident in practice, and had improved their knowledge and skills sufficiently during their internship. This is consistent with the findings of Smith and Pilling (2008), who reported that new OTs felt more confident in the workplace after five to six months of practice. Therefore, this suggests that OT interns may need more time to get used to internship practice, or there may be a relationship between their need for time and the application of skills, knowledge, and previous experiences they learned at university in the context of the internship.

8.2.4 Loss of control (COVID-19)

The COVID-19 pandemic was found to cause negative feelings for OT interns. COVID-19 is a new disease, and the first case in KSA was confirmed by the Ministry of Health on 2nd March 2020 (WHO 2022). In the early months of the COVID-19 pandemic, little was known about the virus's mechanisms of transmission and pathogenesis. During the pandemic, 76.53% of Saudi health organizations continued their internships, whereas 23.47% decided to suspend these programmes (Bugis 2020).

Gallagher and Schleyer (2020) stated that intern students may have felt worried, anxious and vulnerable to the virus. Indeed, in this study, three participants presented a negative impact of their internship experiences during the pandemic by using the

words “mess”, “vision was not clear” and “challenge” to describe their experience when they started their internships late due to the pandemic, sometimes only attended two days a week, and faced many challenges. Indeed, OT interns felt out of control regarding the Covid issue, as they explained that they did not know how to control it, the hospital could not always control it, and many things changed during the pandemic. Accordingly, the results of this study agree with Bugis (2020), who found that the impact of the COVID-19 pandemic on internship activities in Saudi Arabia was profound. Moreover, Vittrup and Davey (2010) previously explained that learning approaches should offer relevant options to equip OT interns for indeterminate knowledge arenas. Consequently, the university educational experience of OT students should include being prepared for changes in practice and participating in innovative problem-solving in unforeseen crises such as the pandemic.

While Saudi health organizations took different actions and applied preventive guidelines issued by the CDC and WHO (e.g., PPE, social distancing and COVID-19 testing) to overcome the issues faced by interns and other healthcare workers during the pandemic (CDC 2022; Bugis 2020), OT interns experienced a lack of protective equipment during the pandemic. This was consistent with other studies which found that healthcare workers faced issues such as the shortage of PPE (Rajkumar 2020; Liu et al. 2020), and this contributed to mental health problems in populations such as Indonesian internship doctors (Lugito et al. 2021). Abey and Cole (2018) argued that in times of austerity and constraints, resources may become tighter and more rigorously controlled, affecting quality within the healthcare environment. This happened to OT interns during the COVID-19 pandemic: for example, Marram mentioned that “*N95 masks were only prescribed for therapists*” (158), and not for interns, which might cause interns feel less valued compared to others during internship. This raised safety concerns amongst the OT interns, especially considering the shortages of medical supplies and PPE. Therefore, PPE should be made available not only for doctors, but also for all clinical and non-clinical staff and students in healthcare environments.

The results of this study also indicate that the interns uncovered several negative impacts of COVID-19 on their internship, including not having lectures in hospital, not feeling integrated for the first few months, and forgetting how to mingle with people. It

seems that these things are important for new practices and have a psychological impact on them during the pandemic period. Thus, Bugis (2020) found that 29.41% of Saudi Arabian interns were worried that the internship experience might be adversely affected, whereas Lugito et al. (2021) indicated that mental health problems were prevalent among internship doctors during the pandemic. Therefore, it would be useful if OT interns were helped to integrate into their internships during and after the pandemic, so that these negative experiences would not affect their practice experiences when they become independent specialists.

Summary

This part of the discussion has determined how OT interns used emotive negative words (e.g., feeling lost, scared, shocked, and weird) to explain their feelings regarding their early experiences of transition. This impacted their experience because they felt a sense of unfamiliarity and needed to deal within the new environment, faced a lack of experience, as the internship context was different from their previous experiences, felt the negative impact of the theory-practice gap, and felt shocked, nervous and anxious upon entering the world of practice. Moreover, I discussed some barriers that OT interns faced in their internship, as well as how they perceived that effective internship experiences were those that were comprehensive and meaningful to them in term of the organization and personal factors that had a positive impact on their internship period. This included supervision and environmental factors, knowledge and skills, confidence, asking questions, trying to adapt, and the need for time. This section also discussed the negative impact of the COVID-19 pandemic on OT interns' transition. This was because they felt that the situation was a mess, the vision was not clear, they were only able to attend two days a week, they faced many challenges (not having lectures in hospital, not feeling integrated for the first few months, and forgetting how to mingle with people) and they experienced a shortage of PPE.

8.3 The impact of PBL

This theme discusses how different aspects of the PBL course influenced OT interns' practice. Understanding OT interns' perceptions about the influences of PBL in internship has an important impact not only in identifying strengths and weaknesses in implementing the PBL programme, but also in planning future improvements that

can be prioritised to facilitate the transition period for OT students. The literature has documented that PBL strategies emphasise knowledge construction rather than knowledge transmission, as they encourage students to think critically, acquire knowledge and skills, and generate ideas and behaviours required to become qualified practitioners (Alrahlah 2016; Zahid et al. 2016; Choi et al. 2014; Schmidt et al. 2012; Schmidt et al. 2011). However, some universities in the Saudi context have adopted PBL as a new tool without exploring the students' perceptions of this approach and without the presence of any regional evidence (Babiker 2018). Moreover, few worldwide studies have been conducted to understand how the PBL course influences different aspects of the practice (as discussed in the Literature Review, part 1). Therefore, this part will discuss OT interns' experience regarding the influences of PBL in internship practice, covering the interpersonal, cognitive and task-supporting impacts.

8.3.1 Interpersonal impact

The current study found that OT interns shared experiences related to the impact of PBL on their communication and discussion skills, clinical skills, teamwork abilities, confidence, leadership, and personal skills, applying evidence-based practice, and being client-centred thinkers.

Essentially, HCPs need to be proficient in all forms of communication in order to build and form positive therapeutic relationships with patients, their families, carers, and colleagues, as good communication contributes to good team dynamics (Fraser and Bannigan 2018). In this study, all participants (except for Adam) mentioned that communication skills were transferred from the PBL mode of teaching to the practice context. For example, Samia explained that PBL improved her ability to listen and answer questions when communicating with her preceptors during her internship. This result is somewhat consistent with the findings of Wormley et al. (2019) and Evans and Choucri (2012), where PTs and midwives found that PBL helped with their ability to be active listeners, and to make effective use of nonverbal communication with patients and colleagues.

...it allowed me to listen, [hesitating], many parties, or take many opinions...
(Samia:203-204)

Moreover, OT interns in this study indicated that PBL had affected their communication skills in their internship by helping them to talk well with staff, peers, nurses, OTs and PTs (Saad), reporting problems and presenting treatment plans for patients (Marram), knowing the right questions to ask, and improving their ability to answer questions in meetings (Anfal, Marram). These results are consistent with those reported by Consul and Medina (2014), Evans and Choucri (2012), and Cheng (2009), suggesting that throughout the PBL process, students are encouraged to become effective communicators, and in the long term (i.e., in the workplace), effective communication with patients and colleagues will improve the quality of the services provided and enhance the value of practice. Additionally, other studies have confirmed that improving communication skills is one of the most important impacts of the PBL course in HCPs' practice, and is considered key to providing quality care to others and a part of the core competencies of HCPs (McMahon et al. 2016; Schmidt et al. 2011; Prince et al. 2005; Antepohl et al. 2003; Dean et al. 2003).

The previous finding confirms OT interns' sense of the effect of PBL in relation to communication that was transferred from the PBL course to the hospital context, especially in terms of polishing their communication skills, being active listeners, and being able to present patient cases and treatment plans. This further emphasises the effect of PBL, as they developed and honed these skills during the PBL course. Basically, PBL required the OT students to feed back on their individual research as part of PBL group discussions, which helped them to develop their communication skills. Consequently, having appropriate communication skills from the PBL course allowed the OT interns to feel more comfortable about entering their internships as effective communicators and active listeners in the context of both patients and multidisciplinary teams.

The OT interns also realized that their discussion skills had been enhanced by the PBL course, and that these skills could be applied in practice. During PBL courses, every constructive suggestion from students is welcomed during the small-group discussions, in which they are encouraged to express their own ideas. This skill

appeared to have been successfully transferred to OT practice, indicating that PBL influenced practice through improving their contributions to discussions of cases in the hospital's weekly meetings, helped in discussions with the interns' preceptors, and increased interns' ability to discuss issues with hospital teams.

...in the hospital we have like discussion, weekly meeting... I could discuss my cases... with many people... (Samia: 233- 238)

...it helped [PBL] how to discuss [with preceptor] what's best for the patient... (Adam: 280- 282)

Although the literature review behind this study was unable to identify how PBL impacts practitioners' discussion skills, it was found that discussing what was learned in the clinic with colleagues was beneficial for improving clinical competence (Alhaqwi et al. 2010). Cheng (2009) stated that PBL courses can help and encourage some silent colleagues to talk more, as the facilitators ensure that all students participate in the discussions. Moreover, the PBL method helped students in Wormley et al.'s (2019) study to achieve immersion in patient cases, with ample time for reflection and discussion, and this increased their skills when facing similar situations in actual clinical contexts. Likewise, Williams et al. (2012) also concluded that if PBL graduates had participated in complex discussions in the classroom, they would be more comfortable in discussions in professional practice. Accordingly, OT interns in this study emphasized that small-group discussions and dialogue on specific practice issues that were integrated into the PBL curriculum had enhanced their discussion skills in the context of their internship.

While Rodger et al. (2011) argued that the clinical skills needed to engage with clients, and to deal with reactions and family expectations, only happen in a real environment, early studies indicated that clinical skills arise in PBL courses, as students' clinical skills are intensely developed during their studies by pursuing real-life problems (Scaffa and Wooster 2004). In this study, OT interns found that clinical skills gained from PBL influenced their practice, and all participants (apart from Mohammed) indicated that they were able to apply these skills in the hospital context. This result

agrees with previous literature in which students who demonstrated good clinical skills in their PBL courses were found to be more likely to impart these skills in practice contexts when facing actual clients (Bar et al. 2018). Accordingly, even if the clinical skills in a real work context go beyond to those acquired in the PBL course, this search indicate that new practitioners will use the same clinical skills learned in PBL course to analyse the real cases in the context of practice.

Fraser and Bannigan (2018) stated that teamwork contributes to good team dynamics and is fundamental to healthcare delivery. Moreover, Seymour (2013) found that PBL curricula have a positive impact on the development of teamwork skills amongst OT students. The present study suggests that PBL, as an educational method, has the potential to enhance the support of OT interns in internship and strengthen their teamwork abilities. To clarify, OT interns in this study mentioned that they covered interdisciplinary modules through the PBL method. However, only two of the participants confirmed that PBL enabled them to think about how other teams (e.g., PT) might work on the same case (Samia), and helped them to work jointly with members of other teams, such as social workers, primary doctors, and nurses (Marram). This indicates that teamwork is one of the skills developed by OT students during the PBL curriculum and transferred to practice, and it appears that they felt safe in the team, which would increase their self-esteem. Thus, PBL contributed to an enhanced understanding of teamwork for OT interns in KSA, as it provided them with greater knowledge and ability to work in a team during practice.

The OT interns in this study agreed with other studies in the healthcare literature that PBL provides the skills needed, such as how to work with people and work effectively with colleagues (Whitcombe 2013b; Reeves et al. 2004). Moreover, nursing graduates realized that an interdisciplinary perspective and teamwork in the PBL programme were essential to help them meet professional practice competencies and made it easier to work with different professionals (Consul and Medina 2014; Applin et al. 2011). Indeed, the aforementioned studies found similar results to the present study, as their participants realized that their teamwork abilities improved their team-building skills and the ability to collaborate with other team members.

Moreover, in a study conducted by McMahon et al. (2016), all PT student groups valued interdisciplinary learning opportunities, reporting that it was good to know what the other disciplines do. Additionally, PT students with a background of PBL were very familiar with teamwork and demonstrated positive traits in the ability to fit into a team, indicating that this had facilitated their transition to practice (Wormley et al. 2019; Gunn et al. 2012). Accordingly, interdisciplinary learning and teamwork among different members with the aim of achieving a common goal is one of the strengths of PBL modules that may carry over into the context of practice. Hence, universities should ensure that healthcare students are exposed to other relevant professions, as this will ensure that new practitioners are competent in carrying out their duties and open to new ways of working alongside other professions.

It is important to mention that in practice, teamwork cannot be successfully achieved without communicating with colleagues. Good group communication contributes to good team dynamics and enhances the clinical workflow: therefore, it is closely related to successful teamwork and patient satisfaction (Rosen et al. 2018). Thus, the development of both teamwork and communication skills in PBL sessions may boost interns' confidence, as five of the six OT interns in the present study felt that PBL had improved their confidence during their internships. This was manifested through greater confidence in presenting themselves to patients, answering patients' questions, expressing opinions and being responsible for their own cases. This finding confirms the association between confidence and teamwork in practice and is consistent with Lewis's (2018) proposal regarding the importance of practitioners taking responsibility for their areas of work and being able to express their concerns to improve teamwork. Moreover, two interns (Mohammed and Anfal) explained their sense of confidence by using the terms "*bold*" (Mohammed: 303) and "*bold enough*" (Anfal: 212) to suggest their ability to express the opinions and their courage to talk and to ask questions during their internship. Therefore, feeling confident can be considered to be an impact of the PBL courses on OT interns' experience.

Mainly, confidence was considered important to the ability to prescribe a diagnosis and plan of care, as previous PBL research has recognized that projecting confidence as a new practitioner during the transition period is key to being a successful health practitioner (Wormley et al. 2019; Gunn et al. 2012; Chikotas 2009; Reeves et al. 2004;

Dean et al. 2003). Indeed, in the PBL programme, students were presented with some challenges that led to the development of the required confidence, and they then transferred that ability and demonstrated self-confidence in clinical practice settings. The results of this study thus support the idea of the effect of PBL on new practitioners' confidence, as there are opportunities throughout the PBL curriculum to build confidence in individual and group presentations, and it also helps OT interns to answer difficult patient questions and develop the confidence to respond in multidisciplinary team meetings in practice (Wormley et al. 2019). Consequently, new practitioners were able to confidently share their knowledge with patients and colleagues and build a reciprocal relationship between the different members of the healthcare team.

One unanticipated finding in this study was that two male participants – Saad and Mohammed – felt that PBL had developed their leadership skills during internship. This finding concurs with the results of Williams et al.'s (2012) study, in which the PBL process influenced nurses' leadership ability and conflict handling in practice, as PBL graduates indicated that they had assumed leadership roles within the healthcare team and were described as competent leaders (Williams et al. 2012). In the context of this research, PBL allowed Saad to develop leading skills and to take responsibility in the discussion sessions in hospital, as he had done this during PBL sessions. Moreover, Mohammed acknowledged that PBL had given him leadership skills, made him feel more confident and responsible for cases, and prepared him to arrange his priorities. This suggests that the sense of leadership can be a distinguishing feature of PBL that impacts OT interns during their internship and makes them better leaders. Similarly, in Williams et al.'s (2012) study, nurses gave credit to the PBL programme, emphasising that it promotes teamwork, respect, and the development of appropriate strategies, and thus makes them better leaders.

An inherent characteristic of the PBL curriculum is that it requires students to search for current literature on each topic being studied. McMahon et al. (2016) emphasized that the PBL curriculum supports students' transition through exposure to EBP, which leads them to look up evidence and develop the ability to communicate their findings. However, only one intern (Adam) commented on EBP, mentioning that PBL helped him to apply EBP through doing things based on research, not on personal effort. This

is consistent with the finding that EBP in OT is typically associated with research use (Reagon et al. 2008), where directing search for evidence towards the occupational science literature and relevant research data (Reagon 2012). However, a possible explanation for this result could be that OT interns did not have sufficient PBL sessions during university, the PBL case were inappropriate or that the EBP term was not known to them. Indeed, several participants reported that the PBL programme helped them to learn how to access the correct information, which indicates that it made them into EBP seekers.

The concept of EBP in this study is in accordance with literature that has explored the impact of PBL in practice, as the PBL curriculum is an invaluable resource in support of EBP. PBL has been identified as an effective method to ensure that practitioners stay up to date with current research and use the most recent information, basing their practices on evidence rather than relying on others (Williams et al. 2012; Applin et al. 2011). Indeed, in a study conducted by Wormley et al. (2019), PT graduates repeatedly emphasized their satisfaction with the EBP process, having developed this skill in PBL sessions by first identifying the problem at hand and then searching for relevant evidence, following by critically evaluating the evidence, consolidating the information and evaluating their findings. This seems to reflect what the OT students did in their PBL sessions. Therefore, this study confirms that PBL graduates can be relied upon in the practice environment because they will know how to obtain reliable information and apply EBP.

Finally, in modern healthcare, client-centredness is a concept that is shared among healthcare professionals and plays a significant role in the development and design of innovative services (Whitcombe 2013b). Abey and Cole (2018) stated that one key feature of PBL is that it enables practitioners to be patient-centred and encourages reflective practice. Throughout his interview, Adam identified that PBL helped him to be a client-centred thinker through keeping patients at “*the centre of the discussion*” (Adam: 287). This concurs with Whitcombe’s (2013b) findings, as one OT participant linked the PBL programme to becoming client-centred and thinking about all the things that affect a patients’ life and how their occupations are affected by their illness. Thus, becoming client-centred thinkers is an impact of the PBL curriculum on OT interns’ practice.

8.3.2 Cognitive impact

This part discusses the numerous cognitive impacts gained from the PBL course that affected OTs' internship. These impacts include clinical knowledge, problem-solving, critical and logical thinking, and clinical reasoning.

The most common cognitive impact of the PBL course was on clinical knowledge. Fundamentally, learning through PBL is centred on real-life situations, not subject matter, in order to achieve meaningful learning (Matheson and Haas 2010), and this develops and encourages the transfer of knowledge – including professional knowledge – so that it is more easily applied to the context of relevant situations (Moust et al. 2021; Clouston 2010). Moreover, knowledge is developed through recognition of what is necessary to solve the problem in the PBL course (Matheson and Haas 2010); consequently, basic clinical knowledge is acquired more effectively (Schmidt et al. 2012). In support of this, in this study, OT interns identified that the clinical knowledge gained from the PBL course had influenced their internships, they were able to apply it in the hospital context, and it helped them in each of the hospital areas. This was through teaching about some diseases and their symptoms, providing new clinical information and modifying false information. This result is somewhat consistent with another OT study which found that PBL had equipped OT graduates with the clinical knowledge needed for effective care delivery and planning in practice (Reeve et al. 2004).

Clinical knowledge was discussed throughout the interviews, but it was Samia and Saad who indicated the concern that clinical knowledge gained from the PBL course was influenced over time and that they lacked deep or wide knowledge. This may be attributed to the fact that the PBL course only gives students knowledge about some areas of OT or it was inappropriate for their current practice context, therefore: they need some time to feel the impact of this clinical knowledge on their internship practice. Indeed, limitations in curriculum design and determination of learning outcomes often lead to a conflict between skills and knowledge that can be considered necessary to meet professional standards (Matheson and Haas 2010). This confirms Samia's feeling that the PBL approach would have kept her more focused on practice

knowledge if it had been applied in all courses. This is consistent with information processing theory, as PBL purports that discussing more clinical cases will assist recall of new clinical information by building on the previously gained basic science knowledge (Onyon 2012). Thus, PBL will increase OT interns' clinical knowledge and help them during the internship period if the curriculum design considers the required professional knowledge.

One of the unique characteristics of the PBL strategy is that it uses ill-structured and real-life problems to stimulate learning and to encourage the development of problem-solving skills (Savery 2015; Gwee 2009). Indeed, PBL differs from traditional approaches to problem-solving methods, as learning in PBL begins with the learners' focus on solving problems from the beginning, regardless of propositional knowledge or pre-delivery of knowledge (e.g., lectures) (Trullàs 2022). Therefore, the current study found that PBL influenced OT interns' experience by helping them to solve problems in the hospital context even if some of the case examples used in college were not relevant to the Saudi context. This was through identifying the main problem and the issues that occurred, knowing the problem as an OT, and understanding the right way to solve problems. The following quotes are examples of OT interns' comments:

... understand the case itself, trying to understand aa what the main problem is, ... and I search for all these aspects... (Samia: 206- 207)

... properly ... the right way to solve problems ... we know that this problem is correct that present, or what is the main problem... (Adam: 107- 110)

This suggests that PBL, as an educational method, may have the potential to enhance the support of OT interns during their internships and strengthen their problem-solving skills, which can be developed through the PBL modules and then carried over to their internships. These findings concur with literature that has explored the impact of PBL in practical settings, in which OT graduates considered that the PBL program equipped them to develop their problem-solving skills (Reeves et al. 2004), and through practice: much of OT practice involves knowing how to implement the problem-solving processes, which is important for professional work (Whitcombe 2013b).

OT interns perceived that critical and logical thinking was another cognitive impact of PBL. Archer (2010) stated that educators need to develop PBL students' critical thinking abilities, so that when new students graduate, they will have gained many skills, such as critical and logical thinking, that are essential in the modern healthcare arena (Abey and Cole 2018). However, in the context of this research, only Marram talked about her ability to apply logical thinking in the hospital context, whereas Mohammed and Samia believed that PBL encouraged their critical thinking and influenced their practice by teaching them how to think during PBL sessions, which improved their thinking during their internships and helped them to consider other aspects that they might not previously have considered, such as family, education or group interventions. Indeed, this sense of logical and critical thinking might explain how OT interns identified the things that caused the problem and the effect of that problem, as Samia acknowledged above. Therefore, the critical and logical thinking skills gained from PBL sessions had influenced OT interns' experience in practice.

These results concur with those observed in earlier studies in which critical thinking was considered as a transferable skill in midwifery and nursing (Nallen et al. 2018; Williams et al. 2012; Applin et al. 2011; Chikotas 2009). Moreover, Consul and Medina (2014) found that new nurses, when they are in biased situations in practice, can develop their logical thinking and apply critical thinking in light of contradictory evidence, as in PBL courses. Additionally, midwives found that PBL let them think critically all the time and frequently analyse what they did in the context of practice: they felt that they questioned things more, instead of just taking things at face value in the hospital (Nallen et al. 2018). Moreover, Cheng (2009) found that through applying the skill of critical thinking based on the available information and evidence, student dental hygienists found that they were better able to determine which method made the most sense. The present study confirms that through small group discussions and dialogue on specific case issues, the process of PBL learning enhanced critical thinking skills for OTs during their studies, and these skills could then be transferred to practice.

Finally, only one intern (Saad) believed that PBL improved his clinical reasoning, stating that the clinical reasoning skills that he had gained from PBL sometimes helped him in practice. A possible explanation for this result may be that Saad or the other OT

interns felt that clinical reasoning in real clinical environments might require additional skills to those acquired in the PBL course. However, this explanation differs somewhat from the findings of Bar et al. (2018), who found that students who demonstrated good clinical reasoning skills in the PBL course were more likely to impart these skills in practice contexts when facing actual clients. Thus, in agreement with Stead et al. (2010), the nature of PBL requires the student to reflect upon the processes they adopt in problem-solving and in their own clinical reasoning and share acquired applied knowledge in practice with colleagues. Therefore, the PBL course should have impacted OT interns' clinical reasoning during the internship, even if they did not notice or explicitly mention this impact.

8.3.3 Task-supporting impact

This part discusses how PBL impacted the tasks that OT interns performed during their internship period. These impacts include information-gathering skills, deal with patients, preceptors and others in hospital, being holistic and patient-focused care providers.

All OT interns identified that the information-gathering skills gained from PBL had helped them in their internships. This was through imparting the importance of reading up on patients' cases in advance and searching for all aspects of these cases (Samia), searching for the right or more accurate answers while taking important notes and others' opinions (Saad), having been taught how to take a good clinical history and obtain the necessary information (Marram), being able to search for information quickly and doing research to provide information about medications (Anfal), reading lots of research about the cases (Adam), and reading information very fast (Mohammed).

Essentially, Knowles' (1984) concept of andragogy assumes that adults are independent and self-directing. In PBL, self-directed learning skills are enhanced by managing a specific problem, where students are responsible for their own learning to find knowledge and evaluating and synthesizing new knowledge from a variety of credible sources (Surif et al. 2013; Braungart and Braungart 2007). Moreover, in the problem investigation stage of PBL, students usually comment on what they are going

to review and think about the gathered information (Bridges et al. 2012). Thus, this feeling of being able to gather information is considered as a skill that OT interns developed from the PBL modules during their studies and carried over to their internship period: during the PBL modules, they honed their skills in reading research, searching for knowledge, and knowing how to find information by themselves.

This result confirms the findings of previous OT studies: for example, participants in Whitcombe's (2013b) study considered that the skill of knowing how to access information is essential in OT, as it is not possible to know everything and certain information may be out of date. This also resonates with the findings of Spalding and Killett (2010), who concluded from their study that OT students appreciated their ability to prepare material in the PBL programme to obtain more information, because this is reflected in real life when they want to collect more information from caregivers, patients, and other healthcare professionals. Likewise, physiotherapy students found that exposure to PBL taught them how to look up information effectively, as this would be very hard if they had not done it before (McMahos et al. 2016). Therefore, OT interns' ability to gather information and access new knowledge to be lifelong learners is deemed important, and it is a skill that OT interns in the present study had developed in the PBL course, as they reported confidence in knowing how to gather the necessary patient information and conduct rapid and effective searches of databases and the literature.

The results of this study show that PBL helped OT interns to know how to deal with patients (Marram), preceptors (Mohammed) and others in hospital (Mohammed and Anfal). However, the participants in this study did not explain this effect. A possible explanation for these results may be that OT interns were willing and able to engage in complex situations during PBL, and experiences of these confusing discussions in the classroom increased their confidence in their internship, as they were prepared to be more independent in dealing with difficult situations and conflicts and more able to interact with others.

This possible explanation concurs with those observed in earlier studies, which have reported, for example, that learning and using conflict resolution skills in the PBL process made it easier for nurses to deal with any discomfort with co-workers in

practice (Williams et al. 2012). Moreover, Cheng (2009) found that in PBL, every constructive suggestion from students is welcomed during group discussions; students are also encouraged to express their own ideas, and through social interaction, the ability to deal with criticism from others can be improved in practice. Indeed, in a study conducted by Spalding and Killett (2010), OT students appreciated challenges from their peers in practice and knew how to deal with them, because they had done this in PBL sessions. This illustrates how PBL helped OT interns to learn how to deal with patients, preceptors, and others during their internships.

Throughout the interviews, respondents discussed the importance of being holistic and patient-focused care providers, but it was Samia who acknowledged this most strongly. Prior research with OTs reflects this finding and considers holistic care to be an important effect of PBL, as it encouraged OTs to consider all aspects of the person, thus adopting the holistic approach (Whitcombe 2013b; Reeves et al. 2004). Through practice experiences, participants understood the need to consider what is meaningful to the client and to consider the lives of others, such as their family or caregivers, reflecting what they had done in PBL scenarios. In the context of OT interns, Samia felt that PBL encouraged her to take a holistic perspective and not just think about medical problems, as it enabled her to think about older people and how family or ADLs might affect their lives and to see different aspects of the patients themselves. The quote is an example of Samia's comments:

... we saw ... the previous level of function, and how it affected her, how she received the intervention and what problems she had, the complications in the hospital and after she went home, and the problems for her family (Samia: 187-190)

In PT practice, it has been found that the participants were able to use a holistic approach to patient management as one of the strengths and central tenets of the PBL programme (Wormley et al. 2019; Gunn et al. 2012). Likewise, PBL nursing graduates indicated that they were more likely to engage in holistic practice and look at patients holistically by paying attention to the overall picture of the patient, regardless of what he or she was going through in the hospital, including social, physical, financial, spiritual and mental aspects (Williams et al. 2012; Chikotas 2009). Thus, focusing on

patients and knowing more about them will help OT interns to immerse themselves in patients' cases during PBL sessions, with ample time for reflection and discussion, and they will feel that they are becoming holistic and patient-focused care providers when facing similar situations in actual clinical contexts. Therefore, the PBL approach lends itself to teaching the holistic process and applying it in practice, and is inherently patient-focused, enhancing the different aspects of each patient.

Other ways in which PBL influenced OT interns during their internship period included helping them to know their roles, undertake whole activities in practice, and provide group interventions (Saad); to involve caregivers and to become familiar with cases (Marram); to identify both short- and long-term goals (Mohammed); and to understand the way in which to treat patients (Adam). As the literature review behind this study was unable to identify the impact of PBL in supporting these tasks in practice, these are novel findings that cannot be discussed in relation to other authors' findings.

However, it has been reported that when all new HCPs have clear expectations of their role, the transition becomes comfortable (Zinsmeister and Schafer 2009). All of these results indicate that the OT interns benefited from the PBL sessions, as they covered group intervention within PBL, and knew their roles within the PBL group. For example, Saad explained that he learnt from the PBL course whether he was a facilitator, the person holding the debate, or the one offering opposing views. Moreover, during PBL sessions, OT students needed to identify both short- and long-term goals, and this was reflected in their real practice experience. Additionally, OT students tried to help patients (cases) during PBL sessions by understanding the way in which to treat patients, such as “*splints*” (Adam: 255) and “*right positioning*” (Adam: 258), and they consequently felt comfortable treating patients based on information taken from reliable sources. All of the above examples indicate how PBL affected the tasks that OT interns performed during their internship period.

...you will give it [to the patient] while you are comfortable, and you know that you are doing the right thing... helped me lots when you give a patient treatment based on books (Adam: 261-264).

Summary

This part of the discussion has demonstrated how different aspects of the PBL curriculum influenced OT interns' practice. The discussion of the interpersonal impact evidenced that PBL had an impact on the OT interns' practice with regard to their communication and discussion skills, clinical skills, teamwork abilities, confidence, leadership and personal skills, applying evidence-based practice, and being client-centred thinkers. The cognitive impact explained the effect of PBL on clinical knowledge, problem-solving, critical and logical thinking, and clinical reasoning. The task-supporting impact illustrated how PBL impacted OT interns' information-gathering skills, being holistic and patient-focused care providers, dealing with patients and preceptors, knowing the roles of OTs, undertaking whole activities in practice and providing group interventions, involving caregivers, familiarising themselves with cases, identifying both short- and long-term goals, and understanding the way in which to treat patients.

8.4 Conclusion

This chapter has discussed the individual and shared lived experiences of OT interns using three superordinate themes that emerged from the previous chapter whilst relating the findings to the available literature. The literature review showed that few articles, majority were early literature, have addressed the impact of PBL in OT/HCPs practice. Existing research primarily addressed the lived experiences and meaning-making of OT interns in KSA, the barriers and enablers that they encountered, and the impact of PBL. This chapter has discussed the themes that resulted from OT interns' experiences (undergraduate period, internship experiences, PBL impact). The discussion demonstrates how the combination of PBL in KSA universities, which helps to develop many skills, together with the provision of an excellent environment and supervision during clinical internships, might fully equip OT student to successfully make the transition into new practitioners. In light of these findings, the next chapter will provide the conclusion, recommendations and limitations.

Chapter Nine

Conclusion

9.0 Introduction

The previous chapter discussed the lived experience and meaning-making of Saudi OTs when they move to practice, and explained how PBL courses influenced these interns' practice. The aim and objectives of this thesis have been achieved by using IPA qualitative research methods grounded in Smith et al.'s (2009) approach and social constructivism, which helped to understand the hidden experiences of six SA OT interns. This included analysing each story using the descriptive, conceptual, and linguistic elements of IPA analysis to make sense of the individual and shared lived experiences. This chapter will conclude by answering the study's research question and describing how this study's contributions to knowledge can impact practices. Moreover, I will discuss the limitations of this study and make some recommendations that I hope will be useful for universities in KSA, the practical environment (internship), OT interns, and future research. Finally, I will provide some suggestions for future work and the reflective journey that I took during my doctoral period.

9.1 Answering the Research Question and Contribution to Knowledge

This study's research question was: "What are the lived experiences of transition to practice among OT internship students from the PBL programme at a university in KSA?". This included exploring the lived experiences and meaning-making of OT interns during their internship, the enablers and barriers that they encountered during their transition to practice and the influences of PBL during this transition.

The PBL implemented in this study was valuable during the undergraduate period and in practice, as OT interns recognised the benefits that could be gained if the concept and goal of PBL were made clear, although the university should ensure that the PBL scenarios presented are relevant and applicable to the KSA context and grounded in real practical cases. The evaluation of this study found that the group PBL sessions were successful in promoting the achievement of some educational outcomes during the undergraduate period. This including feeling more empowered and being heard, being more daring and courageous, developing leadership skills, taking responsibility, having a holistic perspective and becoming more independent through self-learning

and searching for information, as well as helping with cooperation, enhanced working and sharing knowledge during studying. Academic learning and supervision during the internship brought new OTs to the point of developing educationally, personally and professionally, but these interns needed more practice opportunities and PBL courses during their education to improve their professional and personal skills in the internship context.

The meaning of transition to internship seems to involve the process of change or crossing over from student status and being supervised by a supervisor in a specific environment, to being an independent OT. When considering the feelings of being lost, scared, shocked and weird that were related to the respondents' early experiences of internship, it seemed that the OT interns experienced a sense that everything was new and unfamiliar, as they needed to deal with an entirely new environment and a lack of experience, along with the negative impact of the theory-practice gap. They thus felt shocked, nervous, and anxious upon entering the world of practice. However, personal factors (e.g., knowledge and skills, confidence, continuing to ask questions, trying to adapt, and the need for time), as well as support from the organization (e.g., supervision, the environment, and social support) made them feel less isolated, as they were able to share mutual issues and discussed problems, as they had done in their PBL groups.

From the study findings, I believe that PBL has had a positive impact on a wide range of internship components, varying from the OT interns themselves to the positive outcomes towards organisational and patient care goals. The OT interns' experiences of the impact of PBL clearly demonstrated that these sessions increased their confidence when they worked with other HCPs, enabled them to integrate their knowledge into their internship practice, gathering information and doing further research by themselves. Most importantly, in terms of pedagogical approaches, OT interns identified PBL as beneficial for enhancing their clinical knowledge and skills, problem-solving abilities, critical and logical thinking, clinical reasoning, communication, teamwork, being holistic care providers, and remaining patient-focused, all of which they believed were necessary for their practice.

The findings from this study therefore add a significant contribution to research into OTs' practice transition. The results presented in this thesis have helped to highlight important issues related to implementing PBL during the university period, the early experience of transition to internship, personal factors, supervision, the internship environment, and how PBL influences interns' practice, which might all be developed as part of my professional activity as a supervisor and lecturer for OT interns. All OTs' stories about their internships were positioned within the context and cultural of KSA, as this is believed to be the first study in KSA that seeks to understand the lived experience of OT interns and how PBL influenced their practice. This study used Smith et al.'s (2009) IPA as methodological approaches, as they allowed for more freedom and creativity in data analysis, with reflection and discussion throughout the study.

9.2 Study Limitations

There are some limitations in this study. I will thus summarize them in the following two subsections, which will address study-related and researcher-related limitations, respectively.

A. Study-related limitations

1- Methodologically, the sample was small, as it explored the experiences of six OT interns in the internship phase (three females and three males), using data collected from one geographical area in the middle region of KSA (Riyadh), and focused on one group of graduates from the same university. Therefore, it cannot be assumed that the results will be transferable to other locations in KSA or elsewhere in the world, where transferability is not the intention of an IPA study despite the emergence of themes and patterns that are potentially relevant to new OT practitioners.

2- There is a potential for non-specific bias in this study, as the OT interns were a purposive sample who volunteered to participate. Their motivations for participating were not explored, and they were also undertaking their internships during COVID, which might have influenced their participation.

3- My professional and personal experience and knowledge might have generated bias that influenced the data and conclusions related to OT interns' experience, even though I clarified my position through the IPA research process and the

analysis. It might have been possible to assign independent researchers to collect and analyse the data to remove this limitation. However, this study was conducted as part of a PhD, so it was shaped according to the requirements of the university, and as a novice PhD researcher I was responsible for all stages of data collection, analysis, and translation. However, assigning independent researchers would be an option to reduce this bias in future research.

4- This research objective did not directly address the influence of culture or environment on the OT interns, nor did it investigate the participants' economic and social levels. However, I acknowledge its relevance, as these issues nevertheless arise from this study data. Thus, this needs to be studied further to determine whether culture or environment might influence the OT interns or if their socio-economic background might affect their transition experiences.

5- The academic supervisors in this study were unable to check the transcripts against the recordings because the data were collected, transcribed, and analysed in Arabic, and then the quotes used were translated into English for the results chapter. Thus, some problems might have arisen during the translation, as some Arabic words do not have clear meanings in the English language or have multiple meanings. Therefore, even if a translator, dictionary, or proofreader is used, it is important to point out that some words might have lost their meaning through the translation process.

6- The Saudi and Arab literature on OT and the internship period was scarce, and some difficulties were encountered in accessing the curricula of Saudi universities and how to apply PBL. Thus, there may be limitations in this study in terms of comparing the results with those of other studies in related contexts.

B. The researcher-related limitations

1- Obtaining a research sample was not easy, as obstacles arose in the data collection process due to regulatory restrictions at the time of the pandemic. Therefore, access to the sample was changed: instead of hospitals or health centres, participants were accessed through one university. These time constraints extended the period of data collection, transcription and writing-up for a full year.

2- The pandemic also meant that I was unable to conduct the interviews in the hospital environment and meet the participants face-to-face; instead, the

interviews had to take place over the phone. At the beginning of the interviews, I found it difficult to encourage the participants to talk freely about the research questions. One solution to this might be to conduct video interviews instead of voice interviews, but the participants wanted the interviews to be carried out by voice only. This restriction led to some limitations in assessing body language or gestures while responding to interview questions. However, the voice interviews allowed the interviews to be conducted at any time that was convenient for the participants, and enabled me to take notes that I could use during the analysis.

9.3 Recommendations

This study has generated many recommendations: for clarity, they have been divided into four sections:

A. Recommendations for KSA universities:

1- Essential characteristics of PBL should be clearly set out and explained to OT students during the university period. They need to be informed about the fundamentals of PBL and its specific meaning, and everyone's roles should be clarified before starting the PBL course.

2- OT university departments in KSA should assess the PBL approach in the context of the curriculum to ensure that it is relevant and appropriate to fulfil the needs of OT students in the Saudi practice environment and culture, with an emphasis on the provision of sufficient PBL educational courses during their studies.

3- The KSA OT program in general and the university curriculum in particular should prepare students for practice by providing an adequate practical course and more practice opportunities during education, including some modules that link OT students to practice directly, e.g., fieldwork and interdisciplinary educational opportunities. This will improve the professional skills that OT students will need in their future workplaces, provide real-world experience in a dynamic and complex clinical environment, enable them to learn from other members of the team in practice, and will help them to function within a wider healthcare network and within an interprofessional work environment during their internship.

4- Universities in KSA should create a course or orientation programme to be provided in the last semester that is concerned with linking students during their university studies with the expected practice, including introducing them to their new practice environment, showing them how to transfer their current experience and information, and outlining the difficulties that they can expect to encounter, with a focus on the experiences of former students. Close cooperation between OT students, clinical stakeholders and academic staff is vital to ensure the success of the transition to practice.

5- Universities in KSA are advised to re-evaluate OT programs to reduce the gap or deficiency faced by OT interns in terms of skills and knowledge. For example, ensure that the PBL curriculum supports OT students' transition through exposure to EBP, with further discussion of clinical cases during their PBL. This is an effective way to stay up-to-date with current research, and to use the latest information to ensure that they base their practices on reliable evidence, as this will increase the OT interns' clinical knowledge and assist them during their internship.

6- Learning curricula should offer relevant options to prepare the OT interns for a non-specific field of knowledge such as pandemics.

B. Recommendations for the practical environment (internship):

1- New OT interns need to reflect on their early transition experience and articulate the new professional behaviour that is expected of them in this new environment, so that they can adapt to the new environment, roles, and training context. Regular meetings at the beginning of the internship can help with this, leading to understand early stages transition experiences and encourage them to strive for learning and development.

2- Supervisors should provide more formal and informal support to new OT interns than is currently available. This should come from experienced OTs, with a focus on support in the form of individual supervision. This will get the most out of supervision by introducing OT interns to professional work and setting high standards of practice.

3- It is advisable for the hospital environment to provide a clear program structure and guidance forms for the interns, deliver lectures and tutorials, set

up a training committee, and establish a weekly record to follow up the goals of the OT interns during the internship period, and to ensure that they are covering everything that is necessary.

4- Workload in the hospital environment must be considered, especially high patient loads, which can ultimately lead to interns' burnout. This also may lead to difficulties with enjoyment or satisfaction during internship and leave limited time for the required supervision, co-working and support.

5- Internship organizations should provide interns with comprehensive orientation programmes before they take up their roles in a new hospital or OT setting to help new OT interns to understand the procedures of this unfamiliar environment and to meet the needs of the internship. This orientation process would clarify expectations and reduce anxiety for OT interns by increasing their awareness of the legal and political side of their practice and giving them an idea of the tasks to be undertaken and the progress to expect.

C. Recommendations for OT interns:

1- It is important for new OT interns to recognize that their professional competence comes through experience and continuous learning, and they should not expect to know everything when transitioning into internship. Therefore, new OT interns should view their knowledge and skills within the confines of being new professionals, striving towards professional competence and learning from the mistakes they make, and from independent reading, social support, taking continuing education courses, establishing contacts with peers, and learning from experienced senior OTs, all of which would be highly beneficial to them.

2- OT interns should know that they are not yet classified as therapists, but that they can be relied upon in sessions under supervision. Therefore, new OT interns should ask for help from supervisors or others if they do not know what to do, and should seek feedback from supervisors during the internship period, as supervisors' feedback will inform and influence their professional behaviour and will contribute to their learning experience, knowledge, and intervention decisions in practice.

- 3- New OT interns need to be aware of the theory–practice gap in the early practice stage and should seek to relate their previously acquired knowledge in the context of current practice to bridge the gap between theory and practice.
- 4- Effective time management strategies, asking help/questions and making efforts to adapt in new practice environment will help OT interns to alleviate some of the challenges of their transition.

D. Recommendations for further research:

- 1- Future research projects should continue to explore the experience of OT interns in KSA, focusing on the enablers and barriers that they face.
- 2- It is important to understand OT interns' perceptions about the influences of PBL during their internship in order to identify strengths and weaknesses in the implementation of the PBL programme, and to plan for future improvements that can be prioritised in order to facilitate the transition period for OT students.
- 3- Universities in KSA and OT programmes should compare the outcomes of PBL with those of traditional methods in terms of impact on practice, and should explore students' perceptions of this approach and understand how the PBL course affects different aspects of internship.
- 4- Longitudinal research examining the impact of PBL on transition to practice would be valuable to assess OT students from the beginning of their studies until they complete their internship. This could be helpful in understanding when and how OT students benefit from PBL, and establishing how best to meet the needs of OT students and interns from the onset of their studies through their early experience of transition and afterwards when they are qualified practitioners.

9.4 Future Work

The role of the university in shaping OT students' transition experience was important in this study. Therefore, through my position as a lecturer in one Saudi university, I will first assist in the establishment of an OT department and curriculum at this university, considering the implementation of the PBL educational method in the curriculum. In light of the results of this study, I will ensure that the concept and characteristics of PBL are clear to OT students, and that the PBL scenarios are relevant or applicable

in KSA and are based on real practical cases. Also, I will ensure that academic learning is associated with more practice opportunities and supervision in practice, in order to develop new OTs in terms of their educational, personal and professional development to improve their skills for future practice. Finally, I will make sure that there is a module in the last term of the study that connects OT students with their future internship roles, considering the nature of the internship, their rights, what is expected of them, the challenges they are expected to face, and how to deal with such challenges. Additionally, I will put them in touch with previous students so that they can benefit from their experiences. These plans can help OT students to better prepare for their internships and know how best to handle transition, interact with supervisors and patients, and be confident in discussions within healthcare teams.

As a junior researcher, I believe it is wise to invest in meaningful internships. I will collaborate with interested researchers in KSA to create an internship handbook for OTs and a training manual. This will provide a clear framework to enable new OTs to experience a meaningful internship period, providing effective care whilst feeling confident in their role, leading an improvement in the delivery of high-quality services and thus benefiting the patient experience. Moreover, I will also participate in publications, conferences, and organized events in collaboration with partners nationally and internationally. This will be a catalyst for continuing research and development, allowing me to apply the experiences and skills I have gained during my PhD in my future life.

9.5 Reflexive Epilogue

At the end of this thesis, I will mention the reflective journey that I took during my doctoral period and that brought me to my current stage of life. I realize that my thinking and my view of the world have changed dramatically from what they were before the doctorate, as I see life situations from several angles, and am more critical, analytical, and questioning. In fact, I could no longer believe that there is a single truth to things or see things in simple ways, as my PhD made me search for hidden truths. So, I think my lens on how I see the world has changed permanently. I expected my journey to be straightforward, but what I faced was far from that, and was punctuated by many challenges including the extended impact of the Covid-19 pandemic from the

beginning of my journey. Therefore, this journey was challenging both from a practical level and from a personal development perspective. Adapting to the need for flexibility and taking on different roles with support, guidance, achievement, and commitment to the end goal was essential and motivated me throughout the journey. In fact, during the implementation and writing of my PhD, I learned that moving away from research or not thinking about it is important. This enabled me to bring myself back to reality and the lives of the people around me, away from the research, which led me to the conclusion that my doctoral study is a training course for future independent researchers, and that I need to coexist and adapt to the world and the conditions of the people around me. The importance of exploring students' experiences in the OT program is related to my future role in teaching OTs. I understand my future place in the academic community and how I can make changes based on the results of my research. This will particularly affect my way of dealing with students to link them to practice and try to reduce the challenges they will face during the transition. I believe this thesis is the beginning of my research journey, and I will continue to explore the voice of OT students in the future.

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Appendices

Appendix 1: PBL process.

In the first session of the first Problem-Based Learning (PBL) block, the tutor should introduce themselves to the group and facilitate a formal round of introductions for all group members. Ground rules should be discussed, including issues related to timeliness, attendance, preparation, roles, communication, and appropriate group behavior. The tutors should inform the students about the PBL evaluation process and discuss with them the form titled "Participation List" (Appendix 2), in which the scores of students will be recorded. The form titled "Distribution of Chairman and Secretary Roles" (Appendix 2) should be circulated. On this form, all students will enter their names, stating their availability for the roles of chairman and scribe for the entire block.

Students will be presented with a written problem (trigger text) at the beginning of session one, which contains five steps to be read. The first step is identifying the cues, where students identify important trigger words from the problem and list terms that need clarification. The second step is problem formulation, where students formulate an overall statement that synthesizes the cues and the important information provided. They also identify specific sub-questions to investigate if needed. The third step is hypothesis generation, considered the most important step of session one, where students are supposed to brainstorm. They need to generate hypotheses about the causes of the problem, using their prior knowledge to discover what they already know and what they lack related to the basic mechanisms that might explain the problem. Students will always be asked to justify their propositions and answers, as well as identify from the problem what supports or weakens their hypotheses. In step 4, hypotheses generated in Step 3 are clustered and arranged in a logical sequence (hypotheses organization). The final step (5) in session one is formulating learning objectives, where gaps in knowledge are identified for self-study and research, arising from the clustering of the hypotheses in Step 4. The learning objectives should be prioritized.

The second session has three steps starting from step 6, where students discuss what they learned from session 1. During this step, students report on learning topics identified in the previous session. They present their findings in their own words, discuss additional resources, and refine the hypotheses. The chairman first gives a summary of Step 5 and the learning objectives identified by the group. The students

then start reporting their findings for the learning topics. The seventh step is an inquiry plan and information gathering, where students need to identify the specific clinical information needed about the patient in order to reach a diagnosis. The final step in session two is diagnostic decision, where students formalize the diagnostic decision into a summary explaining the cause in terms of basic science and epidemiological evidence.

The third session, which is the final session, has three steps starting with step 9, where students review what they learned from session 2. This step is meant to provide a sense of closure by summarizing the whole process of a proper diagnosis based on evidence. The next step is management, where students discuss management based on the following guidelines: patient problem list, goals, options, qualifying factors, and the presence of evidence for management decisions. Students apply these guidelines to short-term and long-term management, in addition to outcomes and prevention. The final step, step 11, is a review and evaluation of the process, the problem, and the group. At the end of the session, students review the whole process and all the steps. They reflect on their own performance and the performance of the chairman, secretary, and the tutor.

Appendix 2: Tutor's Manual for the PBL, 11 Steps.



Tutor's Manual for the
Problem Based Learning
11 Steps



2013



Tutor's Manual for the
Problem Based Learning
11 Steps



Edited by:
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FOREWORD

I have great pleasure in writing this foreword for the Tutor's Manual for the Eleven Steps of PBL. A good manual covering the steps of Problem Based Learning (PBL) with practical examples will contribute to the standardization of the process of facilitation. The manual focuses attention on basics as well as advanced aspects yet keeping simplicity and readability that would help any beginner and expert alike enjoy reading and understanding.

A distinctive feature is the column with additional remarks that discusses the finer details of the PBL steps and provides some very useful tips for the facilitation process. It carries the rich experience of the discussions from the workshops on PBL organized by the Department of Medical Education and the Faculty Development Committee, College of Medicine, [REDACTED] Sciences.

This is a result of teamwork resulting from contributions of tutors, and faculty involved in the Faculty Development Committee and the Department of Medical Education.

PREFACE

It gives us great pleasure to introduce this Tutor's Manual for the Eleven Steps of Problem Based Learning (PBL). This manual can be used by faculty members tutoring in the Phase I and II of the College of Medicine, [REDACTED]. This manual provides a brief theoretical background of the Eleven Steps and focuses primarily on the process of implementing these steps by giving practical examples using a sample case (trigger text). In our view this manual will standardize facilitation in PBL sessions.

Each step is discussed in two columns. The first column contains an introduction of the step and examples of anticipated responses by students during that step. The second column provides additional remarks related to the step, which have mostly been extracted from experiences of tutors facilitating PBL sessions. The division of time is an average estimate and it may differ with the actual time required in a case-to-case basis. The Eleven Steps have been packaged in three sessions but the distribution of steps in the three sessions might differ in some cases.

We would like to thank other contributors, in particular, Drs [REDACTED] in our Department, and Dr [REDACTED] and the Faculty Development Committee for their editing of the manuscript and other extremely valuable suggestions in the preparation of this booklet.

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INTRODUCTION

The College of Medicine [redacted] for Health Sciences opted to adopt a hybrid curriculum offered by Sydney University Medical Program (SUMP) that offers PBL as one of the main educational strategies along with lectures and other teaching and learning strategies. PBL in this program is extended to a full problem-solving cycle, starting from enquiry, through investigation and diagnostic decision-making to management and prevention of the problem. The process is covered in three Tutorial sessions following eleven steps.

This manual provides a brief theoretical background of the eleven steps and focuses primarily on the process of implementing these steps by giving practical examples using a sample case (trigger text). The Eleven Steps have been packaged in three sessions but the distribution of steps in the three sessions might differ in some cases.

Groups can respond in different ways to a given problem and these differences can be reduced if the eleven steps are followed in a similar fashion in all the groups. This manual helps to make the eleven steps clear so that they may be easily followed.



Figure 1: The Eleven Steps in the Three Sessions of PBL

SESSION ONE

Duration of session = 90 minutes.

Students will work in groups of eight to ten students guided by their Tutor. They select a Chairman to guide the process and a Scribe to document the session flow.

In the first session of the first PBL of the block, the Tutor should introduce himself to the group and facilitate a formal round of introductions of all members of the group. Ground rules should be discussed which include issues on attendance, timeliness, preparation, communication, roles and appropriate group behavior. A detailed document on ground rules can be seen in Appendix 1. The Tutors should inform the students about the PBL evaluation process and discuss with them the form titled, "Participation List" (Form 1), in which the scores of students will be recorded. The form titled, "Distribution of Chairman and Secretary Roles" (Form 2), should be circulated. On this form all students will enter their names stating their availability for the roles of chairman and scribe for the entire block.

Students are presented with a written problem (trigger text) in the beginning of the Session One. Below is a sample trigger text that is presented in this manual as an example to elucidate the anticipated student responses.

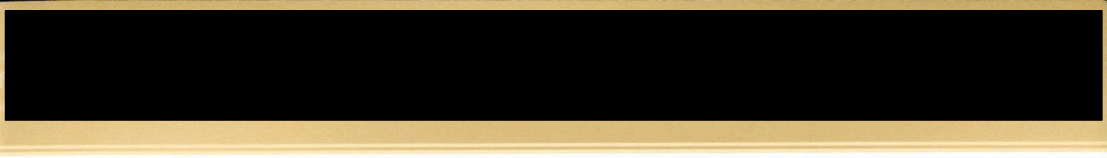
Sample Trigger Text:

"You are a medical student assigned to a registrar on duty in the Emergency Medicine Department at Central City Hospital. About 30 minutes before you see him, Mr John Sarich was wrapping and stacking newspapers at his suburban newsagency when, over the course of a few minutes, he felt a pain in his chest. He called his wife, who was working with him in the shop, and she drove him to hospital.

When you see him, Mr Sarich says, he is still in pain..."

Steps and Anticipated Student Responses	Additional Remarks
STEP 1 - IDENTIFY THE CUES: (20 minutes)	
<p>Students identify important trigger words from the problem. They also list terms in need of clarification.</p> <p>Anticipated Responses:</p> <p>Acute onset, continuous pain in the chest</p>	<p>Advise students to underline key-words/ cues while their colleague is reading the task out loud.</p> <p>Discussion points mentioned at this stage of the tutor guide might NOT be included in the discussion yet, at this stage.</p>
Steps and Anticipated Student Responses	Additional Remarks
STEP 2 – PROBLEM FORMULATION: (10 minutes)	
<p>Students formulate an overall statement that synthesizes the cues and the important information provided.</p> <p>Secondly, students identify specific sub-questions to investigate.</p> <p>Anticipated Responses:</p> <p>Case presenting with continuous severe chest pain of acute onset.</p> <p>Sub-questions to investigate include patient age, weight, smoking history, and lifestyle.</p>	<p>Students usually arrange the cues identified in the first step in the form of a sentence in this step.</p> <p>Sub-questions are like an agenda for further discussion.</p> <p>Preferably, formulation of learning topics should be avoided at this stage in order to lay more emphasis on brainstorming and reactivation of prior knowledge in the ensuing Steps, even though the Tutor guide might identify some.</p>

Steps and Anticipated Student Responses	Additional Remarks
STEP 3 – HYPOTHESIS GENERATION: (60 minutes for Steps 3 and 4)	
<p>Students are supposed to brainstorm in this Step! They have to generate hypotheses about the causes of the problem.</p>	<p>Tell students to stop; take a deep breath; look at the topic; and start thinking about all sorts of things with which they are already familiar in relation to this topic.</p>
<p>Let them think and use their prior knowledge to discover what they already know and what they lack related to the basic mechanisms that might explain the problem.</p>	<p>It is imperative to remind the students that do not have to focus only on the problem statement formulated by them, but they should refer back to the case frequently.</p>
<p>Always ask the students to justify their propositions and their answers. They should identify from the problem what supports or weakens their hypotheses.</p>	<p>Interventions to be tried when brainstorming is slow include giving (practical) examples, asking for examples, being creative in giving hints, stimulating the content of the brainstorming by asking the basic questions about the main theme and sub-themes of What...? Why...? How...? When...? and Where..?</p>
<p>This is the most important Step of session 1!</p>	
<p>Anticipated Responses:</p> <ul style="list-style-type: none"> - How is pain generated? - What are the basic mechanisms of underlying pain? - Discussion of overview of pain at level of cellular damage and pain transmission. 	<p>A good brainstorming process is a debate in which all members of the group have a balanced participation. Make sure students are not talking too much one to one with the discussion leader or Tutor. Diagnosis is not required at this early stage. Instead this stage helps to identify the knowledge gaps that need further investigation.</p>
	<p>Discussion points provided in the Tutor guide can be used as hints to steer brainstorming.</p>
	<p>The Tutor is encouraged to come up with his own additional questions that he can pose to the group in order to facilitate the process of reactivation of prior knowledge.</p>
	<p>The anticipated student response in the Tutor guide is a desired outcome. The discussion points can be used to ensure that students are covering at least 70% of these anticipated student responses.</p>



Steps and Anticipated Student Responses	Additional Remarks
STEP 4 – HYPOTHESIS ORGANIZATION: (60 minutes for Steps 3 and 4)	
<p>Hypotheses generated in Step 3 are clustered and arranged in a logical sequence in this stage.</p> <p>Anticipated Responses:</p> <p>Blockage in a coronary vessel (artery) cuts off blood supply to part of heart (myocardium) leading to hypoxia, ischemia and cell death (heart attack/ acute myocardial infarction).</p> <p>Brief discussion of other possibilities like exertion, tearing of muscle tissue, hemorrhage/ inflammation, (muscle strain), reflux, esophageal irritation, inflammation, (heart burn/ esophageal pain).</p>	<p>The clustering in this Step can be done by making a concept map in the form of a flow chart that explains the logical sequence between the hypotheses resulting from the brainstorming and reactivation of prior knowledge.</p> <p>For example, students can write down the main subject in the middle of the board and draw lines in order to link the related sub-hypotheses. Please see Appendix 2 for an example of a concept map.</p> <p>Students at this stage might not yet come up with a differential diagnosis that is as precise as the one mentioned in the Tutor guide.</p>

STEP 5 – FORMULATING LEARNING OBJECTIVES:

Learning Objectives that identify the gaps in knowledge are formulated for self-study and research.

The Learning Objectives arise from the clustering of the hypotheses in Step 4. They should be prioritized.

Anticipated Responses:

Learning Objectives:

1. Pathogenesis of arterial disease.
2. Hypoxia, ischemia and cell death.
3. Causes of chest pain.

Learning Objectives formulated by the students need not be stated literally the same as the Learning Topics from the Tutor guide. For example if students come up with "What are the causes and symptoms of depression" and the Tutor guide states "Mood, affect and depression" then this is enough overlap. There is no way of determining how many learning objectives should be formulated. In practice for most cases there will be between four and eight learning objectives. Make sure learning objectives are not duplicated.

Check whether it is possible to already find the answer of a learning objective during the discussion.

Answers to the Learning Topics should not be distributed to the students at the end of session !! Self directed study is required at this stage.

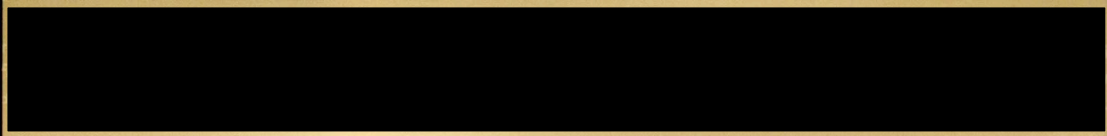
In the weekly Tutor meetings, Tutors can identify the Learning Topics that are most important to cover and hence facilitate the sessions accordingly.



SESSION TWO

Duration of session = 90 minutes.

Steps and Anticipated Student Responses	Additional Remarks
STEP 6 – REVIEW OF LEARNING SESSION 1: (30 minutes)	
<p>During this Step students report on learning topics identified in the previous session. They present their findings in their own words, discuss additional resources, and refine the hypotheses.</p> <p>The Chairman first gives a summary of Step 5 and the learning objectives identified by the group. The students then start reporting their findings for the learning topics.</p>	<p>Make sure you have a clear idea of what students should be able to do and know after discussing the task.</p> <p>Be active: - Ask for clarifications: “Where did you get that information?,” “What source did you use?” ... - Don’t let them proceed too long when things are clearly wrong.</p> <p>Students should be encouraged to use the board to present diagrams and flow charts as they report on the learning topics.</p> <p>If you think that a learning objective has not been answered sufficiently, you can inquire the groups and if required the group can keep the remaining part of the learning issue as one of the agendas for the next meeting.</p> <p>It is important to ensure that the information collected is relevant to the problem.</p> <p>The Chairman can give an oral summary of the discussion to summarize the answers to the learning objectives.</p> <p>This Step results in refining of the hypotheses that will facilitate the process of reaching a diagnosis in Step 8.</p>



Steps and Anticipated Student Responses	Additional Remarks
STEP 7 - ENQUIRY PLAN AND INFORMATION GATHERING: (40 minutes)	
<p>Students identify the specific clinical information needed about the patient in order to reach a diagnosis.</p> <p>Anticipated Responses: Information required on:</p> <ul style="list-style-type: none">- Previous episodes of pain and lifestyle.- Smoking, weight, blood pressure, cholesterol, diabetes and family history.- Results of ECG and biochemical markers of myocardial injury. <p>Learning Topics at this point may include:</p> <ul style="list-style-type: none">- Communication in a medical emergency.- Risk factors for cardiac disease.	<p>When students ask for patient data and results of investigations the Tutor should inquire on their rationale for that data or investigation. The patient data and results of investigation are available on the website.</p> <p>Tutors can gradually project the results of investigations to the students from the website. Otherwise, printouts of patient data to each student should be released gradually.</p> <p>The final part of the patient data about Management and Outcome is not yet released in this session, but is left for session 3.</p>



Steps and Anticipated Student Responses	Additional Remarks
STEP 8 - DIAGNOSTIC DECISION: (20 minutes)	
<p>Formalize the diagnostic decision into a summary explaining cause in terms of basic science and epidemiological evidences.</p> <p>Anticipated Responses:</p> <p>Mechanism: Blockage (thrombus) of a coronary vessel (artery) resulting in ischemia, hypoxia and cell death within the myocardium.</p> <p>Presentation: This leads to acute, crushing central chest pain in a middle-aged man.</p> <p>Supporting Data: Finding of Acute Myocardial Infarction confirmed by history of site/nature of pain (central, crushing) considering previous episodes of pain (angina) and risk factors (weight/smoking), results of ECG, and interpretations of raised biochemical markers of myocardial injury.</p>	<p>The diagnostic decision should always include aspects on presentation, mechanism, and supporting data.</p> <p>Discussion points mentioned in the Tutor guide are optional and they should be used only when required.</p>

SESSION THREE

Duration of session = 90 minutes.

Steps and Anticipated Student Responses	Additional Remarks
STEP 9 - REVIEW OF LEARNING SESSION 2: (20 minutes)	
This Step is meant to give a sense of closure by summarizing the whole process of proper diagnosis based on evidence.	Encourage the students to visualize the relationships between data and theory. Let them use the board to draw flow charts that visualize the data and result in a structured concept map.
STEP 10 – MANAGEMENT: (50 minutes)	
Students discuss management, based on the followings guidelines: patient problem list, goals, options, qualifying factors, and presence of evidence for management decisions. Students apply these guidelines to short-term and long-term management, in addition to outcome and prevention.	<p>The paragraphs on Management and Outcome of the Patient Data are discussed in this Step.</p> <p>Management is meant to discuss, at the individual level, how to deal with that particular patient in the short, medium, and long term. Prevention, on the other hand, is meant as a discussion on the societal level; including possibilities for primary, secondary, and tertiary prevention.</p> <p>Emphasis should be placed on the concept of Evidence-Based Medicine. Students need to formulate a research question according to the PICO concept (population, intervention, comparator, outcome).</p>

Steps and Anticipated Student Responses	Additional Remarks
STEP 11: REVIEW AND EVALUATION OF PROCESS, PROBLEM, AND GROUP: (20 minutes)	
<p>At the end of the session students review the whole process and all the Steps. They reflect on their own performance and the performance of the Chairman, Secretary, and the Tutor.</p>	<p>The Tutor should ask critical questions and dig deeper to let the students come up with valuable feedback. A superficial evaluation-round in which everybody agrees that things went OK is not satisfactory. Please refer to Appendix 3 for basic rules for giving and receiving feedback. The form titled, "Evaluation Form for Group Functioning" (Form 4), can be used by the Tutor to provide a formative feedback to students on their performance. It is not mandatory to fill Form 4. (See Appendix 4c).</p> <p>Students are required to formatively evaluate each other in their different roles as Chairman, Secretary and Group Members. Students have to be critical without offending or becoming personal. The form titled, "Evaluation Form –Chairman" (Form 3), can be used to evaluate the Chairman, however, it is not mandatory to fill the whole form.(See Appendix 4b).</p> <p>The Tutor can keep Forms 3 and 4 for his own record. The form titled, "Collection of Adaptations to be made to Sydney Problems" should be used to note difficulties encountered with the PBL case and suggestions for improvement. This form should be returned to the Block Coordinator at the end of the Block.</p>
<p>An evaluation of the Tutors by the students using the form titled "Tutor Evaluation" (Form 5B) is conducted in the middle and at the end of the Block (See Appendix 4d). Once completed by the students these forms are submitted to Student Affairs Office and forwarded to the Evaluation Unit, Department of Medical Education. Once analyzed, the results are returned to individual Tutors and to the Block Coordinators.</p>	
<p>At the end of the Block, Tutors are required to submit the student scores filled in Form 1 to the Block Coordinators (See Appendix 4a).</p>	

Appendix 1

Details for the first session of the first PBL of the block:

In the first meeting of every course it is important to set the climate, since a good beginning is half the work. Take sufficient time to do this. It will help you to avoid confusion about the block and the group process in the future. In general there are three aspects that need to be addressed: introduction of the tutor and the students, information about the block content, and practical arrangements.

Getting to know each other:

- Break the ice by using introduction games like: letting students introduce their neighbor, let them write down two key words about themselves on a little card,...
- Ask them what they expect from the block, what they hope to learn from it, what they think will be most difficult about it, ...
- Introduce yourself as a social mentor rather than as the teacher: tell something about your personal background, your experience (to establish credibility), how you got to the point in your career where you are now, your teaching philosophy, and maybe most important show your enthusiasm!

The value and content of the block:

- Give an overview of the different subjects to be covered in the block
- Explain the relation to other blocks and focus on the inter-disciplinary nature of the PBL curriculum
- Explain the criteria for passing the block. Share with them Form 1 in which they will be scored and introduce them with the scoring criteria.
- Give an overview of the block planning group: who the block coordinator is, who the

other tutors are, office hours, email addresses, ...

- Determine when and how evaluation of the tutorial group will take place.

Practical arrangements:

- Set rules concerning the starting time of meetings, duration of breaks, tardiness, absenteeism, and the use of mobile phones.
- Talk about the expectations concerning participation: both preparation outside the meetings and contribution during them.

Appendix 2

Basic rules for providing and receiving feedback:

In simplest terms, feedback is a response given to another person about his or her behavior or communication. It is not easy to learn without receiving feedback from one another. Only when one hears from other people about how they perceive his/ her behavior, does one learn about that behavior's effect. These feedback can give indications on the changes required in one's behavior. The following specific suggestions can enhance one's ability to provide useful feedback to others.

- Feedback should be well timed. Feedback is the most effective when given at the earliest post-performance opportunity. So give feedback if possible immediately after the activity.
- Be specific rather than general. Focus on concrete, specific, and clearly defined behavior. Being told that the presentation was 'good' is vague. Better is to tell that 'the presenter gave summaries in between and that this helped you to keep attention'.
- Be descriptive rather than evaluative. Do not give interpretations or judgments about the behavior. Describe what you have seen and what effect it has on you.
- Describe both good aspects and behaviors that can be changed.
- Do not overwhelm a receiver with unnecessary detail. If too much detail is provided in one dose, a listener will have difficulty knowing exactly how he or she should respond. Feedback should be selective. Hit the high points.
- Be open. Allow other members of the group to give their commentary on your observation.
- Deal with behavior that can be changed. Give suggestions how the behavior can be improved. Provide alternatives.

In general it is better to start with positive feedback. It is stimulating for the receiver to hear what went well. Then, he/she will be more open to accept feedback about behavior to be changed.

An effective procedure is the following:

1- What went well (positive feedback)

Describe what was good. "I liked the introduction, you started with a critical issue, which immediately drew my attention."

2- What can be improved (constructive feedback)

3- Indicate how this could be improved. Look for alternatives. "I would have liked if you had..."

4- Is it clear? Check if the receiver of the feedback has understood your comments.

Basic rules for receiving feedback:

- Listen, try to understand the feedback before thinking of and giving counter arguments. Do not act defensively (do not say 'yes..., but...')
- Approach criticism constructively.
- Ask further questions to remove ambiguities; if necessary from fellow students
- Check your own interpretation (feedback understood)?
- Determine whether the effect of your own behavior is desirable?
- Determine whether and how behavior can be changed?



Appendix 3

PBL Participation List (Form 1)													
Name of the Block													
PBL Group:													
Tutor:													
1.1.1 Date: to													
Student Number	Student Name	Problem - 1			Problem - 2			Problem - 3			Total late-comings / early leaves	Total times absent	Total Participation Grade
		Session			Session			Session					
		I	II	III	I	II	III	I	II	III			

Approved by Block Coordinator:

Key:

- : Came late and/or left early and/or left during the session for more than 10 minutes.
- X : Was absent.
- 0 : Did not contribute significantly to the functioning of the group.
- 1 : Contributed (participated) sufficiently to the functioning of the group.
- 2 : Contributed (prepared and participated) very effectively to the functioning of the group (with out dominating other group members).

Appendix 3: Literature search strategy for gap and databases results.

An initial electronic search strategy was conducted from October 2019 to December 2019 to identify gaps in exploring OT internships and students' experiences regarding the influences of Problem-Based Learning (PBL) during the transition period. Initial search key terms were used in five databases to obtain the most appropriate and comprehensive review of the literature (See Table 1).

Table 1 (Search Terms)

Search Terms 1	Search Terms 2	Search Terms 3	Search Terms 4	Search Terms 5	Search Terms 6
occupational therapy*	Practice transition	undergraduate	experiences	Problem-Based Learning	Saudi Arabia
occupational therapist	transition period	internship	practices	PBL	SA
OT	move to practice	preceptor*	perspectives	Enquiry Based Learning	KSA
		"first year of practice"	attitude	Inquiry Based Learning	kingdom of Saudi Arabia
		newly qualified	opinion	Case Based Learning	
		recently qualified	perception		
		placement	views		
		new graduate			

To provide a detailed literature search strategy, five databases were utilized in the research proposal: Medline (Ovid), CINAHL (EBSCO), OT Seeker, Scopus, and Google Scholar. These databases were selected to encompass the most relevant literature related to the research question in the field of Occupational Therapy (OT). However, the database results were not very encouraging, as there was a lack of research on the intersection of OT and PBL in Saudi Arabia (SA). Moreover, the results were nearly non-existent in most of the databases for the combined search terms 1, 2, 3, 4, 5, and 6 (Table 2 – Literature Search Results). This could be explained by the scarcity of articles related to terms 6 (Saudi Arabia) and terms 2 (transition period)

when compared to other research terms, such as search term 5 (PBL). As a result, only four studies have investigated OT students' experiences regarding PBL.

Table 2 – Literature search results

Database	Search terms	Result	Finding	Reading title and abstract	Studies related to gap	Studies excluded	Reason for excluded
CINAHL (EBSCO)	Terms 1,2,3,4,5,6	0					
	Terms 1,2,3,4,5	0					
	Terms 1,3,4,5	61	50	25	2	23	No related to research questions or aims
	Terms 1,3,5	80	66	4	2	60	31 not related to research questions or aims, 27 were repeated
Medline (Ovid)	Terms 1,2,3,4,5,6	0					
	Terms 1,2,3,4,5	0					
	Terms 1,3,4,5	16	16	0	0	16	11 not related to research questions or aims, 5 were repeated
	Terms 1,3,5	28	28	0	0	28	16 not related to research questions or aims, 12 were repeated
OT seeker	Terms 1,2,5	0					
ORCA (Cardiff)	Terms 1,3,4,5	0					
	Terms 1,2,5	37	37	2	0	35	most not related to research questions or aims and view were repeated
Scopus	Terms 1,3,4,5	67	67	6	0	61	31 not related to research questions or aims, 30 were repeated
Google scholar....	Terms 1,5	...	6	0	0	6	No related or repeated

TOTAL		289	270	37	4	229	
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Databases result (1)

07/07/2022, 19:52

Ovid: Abstract Reference

Database(s): **Ovid MEDLINE(R) ALL** 1946 to July 06, 2022

Search Strategy:

#	Searches	Results
1	PBL.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	9467
2	Enquiry Based Learning.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	49
3	Inquiry Based Learning.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	150
4	Case Based Learning.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	860
5	Problem-Based Learning.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	10782
6	Problem Based Learning.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	10782
7	first year of practice.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	236
8	move to practice.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	54
9	clinical practice.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	227699
10	professional practice.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	25408
11	early stage of practice.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	1
12	neophyte.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	241
13	early practice.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	113
14	practi*.mp. [mp=title, abstract, original title, name of substance word, subject heading word, floating sub-heading word, keyword heading word, organism supplementary concept word, protocol supplementary concept word, rare disease supplementary concept word, unique identifier, synonyms]	1759296
15	1 or 2 or 3 or 4 or 5 or 6	19300
16	7 or 8 or 9 or 10 or 11 or 12 or 13 or 14	1759469
17	15 and 16	4583
18	limit 17 to (english language and full text)	502

Search History/Alerts

[Print Search History](#) [Retrieve Searches](#) [Retrieve Alerts](#) [Save Searches / Alerts](#)

Select / deselect all

Search with AND

Search with OR

Delete Searches

Refresh Search Results

Search ID#	Search Terms	Search Options	Actions
<input type="checkbox"/> S3	S1 AND S2	Expanders - Apply equivalent subjects Search modes - Boolean/Phrase	View Results (781) View Details Edit
<input type="checkbox"/> S2	first year of practice OR move to practice OR clinical practice OR professional practice OR early stage of practice OR neophyte OR early practice OR practi*	Limiters - Full Text; English Language Search modes - Boolean/Phrase	View Results (136,833) View Details Edit
<input type="checkbox"/> S1	Problem-Based Learning OR Problem Based Learning OR PBL OR Enquiry Based Learning OR Inquiry Based Learning OR Case Based Learning	Limiters - Full Text; English Language Search modes - Boolean/Phrase	View Results (901) View Details Edit

Database(s): **AMED (Allied and Complementary Medicine)** 1985 to June 2022

Search Strategy:

#	Searches	Results
1	Problem-Based Learning.mp. [mp=abstract, heading words, title]	116
2	Problem Based Learning.mp. [mp=abstract, heading words, title]	116
3	PBL.mp. [mp=abstract, heading words, title]	53
4	Enquiry Based Learning.mp. [mp=abstract, heading words, title]	3
5	Inquiry Based Learning.mp. [mp=abstract, heading words, title]	2
6	Case Based Learning.mp. [mp=abstract, heading words, title]	12
7	first year of practice.mp. [mp=abstract, heading words, title]	11
8	move to practice.mp. [mp=abstract, heading words, title]	0
9	clinical practice.mp. [mp=abstract, heading words, title]	3987
10	professional practice.mp. [mp=abstract, heading words, title]	8342
11	early stage of practice.mp. [mp=abstract, heading words, title]	0
12	neophyte.mp. [mp=abstract, heading words, title]	9
13	early practice.mp. [mp=abstract, heading words, title]	7
14	practi*.mp. [mp=abstract, heading words, title]	37569
15	1 or 2 or 3 or 4 or 5 or 6	138
16	7 or 8 or 9 or 10 or 11 or 12 or 13 or 14	37573
17	15 and 16	61

Appendix 4: Table summarizing the content of the studies.

Title of the study	Author/ Year/ Country	Aim	Study Design/ Method	Study Sample /Size	Findings	Codes	Limitations
Understanding the effects of problem-based learning on practice: findings from a survey of newly qualified occupational therapists.	Reeves et al. 2004 UK	To elicit the graduates' views of how problem-based learning (PBL) had affected their professional practice 8 months after qualification.	Longitudinal cohort study/ A questionnaire. Containing a series of open-ended and closed questions	67 of the 257 questionnaires were completed. From five cohorts of OT graduates who successfully completed a 2-year accelerated PBL postgraduate diploma.	It was found that the majority of the graduates considered PBL to have equipped them well for their entry to clinical practice. Specifically, it was felt that PBL had made a positive contribution to their problem-solving and teamworking abilities and their clinical knowledge and skills. However, it was also found that some of the graduates were more sceptical about the effects of PBL. For this group, PBL was viewed as having had a limited effect on their abilities, knowledge and skills.	-Teamworking abilities -Problem-solving -Confidence -Clinical knowledge -Clinical skills	<ul style="list-style-type: none"> _ 2-year full-time graduate-entry accelerated postgraduate diploma in occupational therapy. _ In total, 67 of the 257 questionnaires were returned completed, representing an overall response rate of 26%. _ The majority of the graduates (79%, n = 53) were female. _ The average age of the respondents was 29 years. _ it was undertaken in a single occupational therapy school, which limits the generalisability of these findings. _ the study is limited by its reliance on self-reported data to assess change.
An evaluation of a problem-based learning experience in an occupational therapy curriculum in the UK.	Spalding and Killett 2010 UK	The evaluation purpose was to determine the students' views of the efficacy of placement PBL for facilitating their learning in the final 3 months of their pre-registration education. The value of this hybrid of PBL during the period of transition from student to qualified occupational therapist is discussed.	Qualitative/ evaluated using both questionnaires and focus groups	Twelve (80%) evaluation forms were completed and returned by students in the first evaluation cohort (2006–2008), and 16 (100%) from the second (2007–2009). Fifteen students from the first cohort attended the time-tabled feedback session and 15 from the second cohort.	<ul style="list-style-type: none"> _ The findings have been used by the authors to inform the continued practice of placement PBL. A judgement about the continued use of placement PBL can be determined; good practice recognized, celebrated and continued; and changes can be proposed for improving perceived weaknesses. _ The preparation for their transition from student to qualified occupational therapist was at the forefront of their learning objectives. The themes raised by the students in the evaluation reflect this:(1) Real cases (that they would be working with when qualified);(2) Real practice (what actually happened for peers); (3) OT for specialized cases (advanced learning); (4) Collaborating with their peers who are seen as experts (because they have worked with the case person); (5) Balancing workload; and (6) Appreciation of their own progress from novice to competent practitioner. 	-Self-directed learning -Information gathering	<ul style="list-style-type: none"> _ The authors recognize that their evaluation was not exhaustive of perspectives but it would be informative for subsequent years. _ This evaluation was in keeping with the normal university procedures for evaluating any module of the programme. Thus, the students were familiar with the process of evaluation having completed one for each module (eight in total) during their education. _ They were familiar with discussions in this group.
Problem-based learning in occupational therapy curriculum - implications and challenges.	Bar et al. B 2018 Israel	To describe quantitatively the PBL program at Tel Aviv University and the challenges implementing such program. In addition, the study compared the PBL grades obtained by students who are native Hebrew speakers with	_ A retrospective cohorts study/ analyzed OT students' grades in the second year PBL course and in the first clinical fieldwork studies from three consecutive	166-second year OT undergraduate students participated	<ul style="list-style-type: none"> _ Pearson correlations revealed significant correlations between PBL grades and clinical fieldwork studies grades. T-test analysis between students who are native Hebrew speakers and those who are native Arabic speakers revealed significant differences in PBL grades. _ Findings imply partial congruence between students' grades in the PBL course and their achievements in the fieldwork studies. The findings of this study indicated that there 	-Clinical skills	<ul style="list-style-type: none"> _ Some information regarding the students, such as their anxiety levels, self-efficacy, previous academic experience, personal values and beliefs and socioeconomic status was unavailable since this was a retrospective study. _ Not explore more thoroughly the impact of cultural and socioeconomic characteristics on students' achievements in PBL course. _ This study focuses only on students who experience PBL curriculum. Further study is needed in order to compare these students with a

		those students who are native Arabic speakers; and, assessed the correlation between the grades in the PBL course and the grades in the clinical fieldwork studies.	academic years (three cohorts). _ Data collection: PBL evaluation forms, Clinical fieldwork evaluation, Preceptor's evaluation, Written assignments.		was a low, but significant correlation between PBL grades and grades of clinical fieldwork studies.		control group of students who do not experience self-directed studies. _ Further studies may also assess the influence of the PBL program on clinical competence and learning skills of OT students.
Problem-based learning students' perceptions of knowledge and professional identity: occupational therapists as 'knowers'.	Whitcombe 2013 B UK	This research explored occupational therapy students' perceptions of knowledge and their professional identity from one problem-based learning programme.	A qualitative methodology using in-depth interviews	20 occupational therapy students in their final year of an undergraduate programme.	<p>The students viewed occupational therapists as 'knowers' rather than as 'knowledgeable' therapists. This distinction is embedded in a professional identity grounded in the dispositions of the occupational therapist and the philosophical constructs that support occupational therapy, but not in the specialist knowledge of occupation.</p> <p>Key findings</p> <ul style="list-style-type: none"> _ Knowledge was judged to be pertinent to occupational therapy if it could be applied to the current practice context. _ Occupational therapy identity was characterized by the philosophical constructs that underpin the profession and not the knowledge of occupation or occupational science. _ What the study has added <p>This research offers a valuable insight into how occupational therapy students on a problem-based learning programme viewed occupational therapy knowledge and professional identity.</p>	<ul style="list-style-type: none"> -Decision making -Problem solving -How to access information -life-long' learners -How to manage caseloads -How to work with people -Client centredness -Holistic practice 	- By locating the study in one university with a small sample of 20 students, the findings are particular to the specific nuances and design of that PBL programme.
The influence of an undergraduate problem/context based learning program on evolving professional nursing graduate practice.	Williams et al. 2012 Canada	To determine how PBL graduates describe the contribution of the educational experience to their professional practice as nurses.	Ethnography (focused) qualitative, participat in the study as individuals (interview) or through focus group discussions.	PBL graduates (N=45)	Graduates described themselves as: self-aware and self-directed critical thinkers, patient advocates able to engage in evidence based holistic practice and interdisciplinary team members able to take on leadership roles and handle conflict.	<ul style="list-style-type: none"> -Teamworking abilities -Leadership ability -Deal with conflict -Self-directed learning -Self-aware -Critical thinkers -Evidence-based practice -Holistic care -Being a patient advocate 	Not mentioned
Problem-based learning and clinical practice: The nurse practitioners' perspective	Chikotas 2009 USA	Explore the lived experience of the nurse practitioner (NP) who had been educated through a problem-based learning (PBL) approach	Qualitative, phenomenological study / in-depth interviews	13 practicing	It was found that information obtained in the PBL classroom could be directly applied to professional practice providing the NP with the skills needed for clinical decision making with a holistic viewpoint and satisfaction in clinical practice.	<ul style="list-style-type: none"> -Clinical decision making -Self-directed learning 	<ul style="list-style-type: none"> _ Methodological limitations to this study included the data collection technique of interviewing _ The degree of truthfulness and cooperation found in the interviewee. _ The time taken to analyze data because of the subjectivity of the research process.

		and the meaning of that education on the NPs current clinical practice				-Critical thinkers -Confidence -Holistic care	_ The quality of the data due to the subjective nature of the research process.
Strengths and weaknesses of Problem Based Learning from the professional perspective of registered nurses	Consul and Medina 2014 Spain	To identify competency strengths and weaknesses as perceived by nursing professionals who graduated with a integrated curriculum and competency-based through Problem Based Learning in small groups	Intrinsic case study/ questionnaire and discussion groups. (combined a qualitative and a quantitative analysis)	29 ex-students	The results show that their competency level is valued in a very satisfactory manner. This level paradoxically contrasts with the lack of theoretical knowledge they perceived at the end of their education, when they started working in clinical practice.	-Problem-solving -Self-directed learning.	Not mentioned
A comparison of competencies between problem-based learning and non-problem-based graduate nurses	Applin et al. 2011 Canada	The objective of this comparative descriptive research was to determine if there was a difference in self-reported competence between graduates from PBL and non PBL (NPBL) nursing programs	Comparative descriptive design/ questionnaire	A convenience sample of 121 graduate nurses in one Canadian province.	There was no statistical significance difference between the PBL and NPBL graduates on self-reported entry-to-practice competence. However, several significant themes did emerge from the answers to open ended questions which asked graduates how their nursing programs prepared them to meet the entry-to-practice competencies and what program improvements they might suggest. Unlike the NPBL graduates, the PBL graduates identified the structure and process of their programs as instrumental in their preparation to meet the entry-to-practice competencies. PBL graduates associated their abilities to think critically and engage in self-directed evidence-based practice as key to enabling them to meet the competencies. A common theme for program improvement for both PBL and NPBL graduates was a request for more clinical time	-Teamworking abilities -Self-directed learning -Critical thinkers -Practice on evidence	_ The reliable and valid instruments for the measurement of clinical competence are developed, there is still the issue of what level of performance is associated with competence and at what level a professional can be identified as incompetent. _ It is possible that in self reporting, respondents might have a tendency to present themselves better than they actually are. _ A limitation of using a postal survey is the small number of potential subjects who actually complete and return the survey. A sample size calculation was used to recruit a convenience sample from all provincial nursing programs in the province. _ Even though the sample was one of convenience, there is no clear indication of how the sample could have been biased.
Education for practice in the UK and Ireland: implementing problem-based learning	Leahy et al. 2006 UK / Ireland	This paper outlines the education of speech and language therapists in the UK and Ireland, and presents a preliminary study of student therapists' perceptions of problem-based learning (PBL) as a learning strategy in preparation for clinical work.	Preliminary study / A survey questionnaire/ Responses were analysed both quantitatively and qualitatively	Thirty- five students completed the questionnaire	Findings support the implementation of PBL in the education of speech and language therapists, with more experienced students showing more positive support for PBL. Issues raised by the study include emphasis on clinical relevance of problems, particularly in the early years of the course. The majority of students regarded PBL as directly relevant for clinical preparation.	-Client management -Clinical knowledge -Clinical skills	_ Student numbers involved in the study were small and further data collection and analysis are necessary to substantiate these findings.
Problem Based Learning in physiotherapy education: A practice perspective.	Gunn et al. 2012 UK	This study aimed to provide evidence of how skills gained through PBL are applied in practice by student physiotherapists, from the perspective of their placement supervisors.	Qualitative/ one-to one semi-structured interview	10 qualified physiotherapists	The supervisors felt that PBL offered positive benefits for both student education and clinical practice. There was evidence of the application of skills and attributes associated with PBL, including positive learning behaviours and a high level of motivation and self- direction. Supervisors felt that proactive students were able to apply transferable skills inherent in the	-Teamworking abilities -Problem-solving -Self-directed learning -Critical thinkers	_ The degree of resonance between the positive attributes that participants felt were displayed by the students and those that are highlighted within the literature may suggest at least some influence of the PBL approach. However the variation that was highlighted within students coming from the same approach would suggest that individual characteristics are significant.

					PBL approach to clinical practice, including a holistic, problem-solving approach and effective team-working but that there was considerable variation between students.	-Confidence -Holistic care	_ Would raise the question as to whether this approach is suited to all learners or merely for those who may display an inherent preference toward collaborative self-directed learning activities.
Students' perspectives of core value development in a modified problem-based learning program	Wormley et al. 2019 USA	To understand, interpret, and describe doctoral physical therapy students' perspectives of core value development in a modified PBL program.	Qualitative study, Phenomenological methods via semi-structured focus group interviews	Twenty-seven of 49 students from a single class participated in the study at the time of graduation.	Eleven emerging themes represented the adjustment to PBL and essence of core value development from the students' perspective. An additional overarching theme "transformation" was also identified as students described a process of "transformation" from student to professional, supported by the curricular elements of the modified PBL process. These findings inform faculty on educational methods and curricular strategies, which may enhance the development of professional core values, regardless of curricular format.	-Holistic care Communication skills -Accountability -Self-reflection -The active learner -Confidence -Where's the evidence -Teamwork	_ There are limitations in qualitative research that must be considered. In this study, we used a small, purposive sample with information gleaned from a single modified PBL curriculum in the Northeast; as such the sample might not be representative of all PBL students. _ The researcher as a faculty member created the potential for researcher bias during focus group interviews and in data analysis. This may have created some fear of ramification causing students to refrain or respond in a way they think the researcher desired. _ Students may have viewed the faculty researcher as a professional role model and may have responded in a way to appease her. _ Researcher inexperience is another potential limitation of this study. _ The researcher's decision to allow the students to reference the core values document during the focus group interview may have been an additional limitation, as it may have influenced student responses. _ Readers may be concerned that focus group inter- views might not have provided as rich of a data set than individual interviews might have, suggesting that data collection via focus group interviews may cause some students to be reluctant to share true feelings in a group setting.
Standing on the precipice: Evaluating final-year physiotherapy students' perspectives of their curriculum as preparation for primary health care practice	McMahon et al. 2016 Ireland	To explore final-year physiotherapy students' perceptions of primary health care practice to determine (1) aspects of their curriculum that support their learning, (2) deficiencies in their curriculum, and (3) areas that they believe should be changed to adequately equip them to make the transition from student to primary health care professional.	Framework analysis methodology was used to analyze group opinion obtained using structured group feedback sessions.	Sixty-eight final-year physiotherapy students from the four higher education institutions in Ireland participated.	The students identified several key areas that (1) supported their learning (exposure to evidence-based practice, opportunities to practice with problem-based learning, and interdisciplinary learning experiences); (2) were deficient (primary health care placements, additional active learning sessions, and further education and practice opportunities for communication and health promotion), and (3) required change (practice placements in primary health care, better curriculum organization to accommodate primary health care throughout the programme with the suggestion of a specific primary health care module).	-Evidence-based practice -Information gathering -Problem-solving -Teamwork	Not mentioned
Does Enquiry Based Learning (EBL) impact on clinical practice? A qualitative	Nallen et al. 2018 Ireland	To elicit perceptions of midwifery graduates regarding the impact of Enquiry Based Learning	Qualitative theory-driven approach/ semi-structured interviews	Fourteen graduates	Findings centred on the theme 'Effect of EBL on clinical practice', with positive perceptions of EBL reported in relation to its connexion to midwifery practice. Findings affirm the view	-Critical thinkers -Problem-solving	Not mentioned

exploration of midwifery graduates' perceptions.		(EBL) on their clinical practice			that EBL augments linkage of theory to clinical practice in addition to linking clinical practice to theory. Consequently, competent practitioners are cultivated and an array of transferable skills developed, thus demonstrating the significant contribution of EBL in enriching clinical practice.		
Problem-based learning and the workplace: do dental hygienists in Hong Kong continue to use the skills acquired in their studies	Cheng 2009 Hong Kong	To explore whether dental hygienists continue to use their PBL skills and how well those skills are being applied in the workplace	A survey and follow-up group interviews	A total of eighteen dental hygienists from the 2006 program	The results revealed that dental hygienists continue to use the PBL skills of communication with the patient, patient education, and independent learning, but seldom use dental knowledge, teamwork, and communication with colleagues. Critical thinking, self-evaluation, and lifelong learning skills showed contradictory results. Besides, stressors under individual work environments, including certain Chinese cultural values, affect the way in which dental hygienists utilize PBL skills.	-Interpersonal skills -Self-directed learning	<p>Interpretation of the data collected in this study is limited by the small sample size as well as by the relatively low response rate among the intended cohort.</p> <p>It is also possible that the responses were overly subjective or biased by the participants' perceptions of their own working situations.</p> <p>The results indicate that the application of some PBL skills was not so much dependent on the ability of a dental hygienist to perform the skill as it was upon external factors such as pressures of the working environment.</p>
Longterm effects of problem-based learning: a comparison of competencies acquired by graduates of a problem-based and a conventional medical school	Schmidt et al. 2006 Netherlands	To study the longterm effects of problem-based medical training on the professional competencies of graduates.	A questionnaire. Participants were requested to rate themselves on 18 professional competencies derived from the literature.	Participants were 820 graduates of a problem-based medical school in the Netherlands (418 women, 402 men).	The graduates of the PBL school scored higher on 14 of 18 professional competencies. Graduates of the problem-based school rated themselves as having much better interpersonal skills, better competencies in problem solving, self-directed learning and information gathering, and somewhat better task-supporting skills, such as the ability to work and plan efficiently. There were no sizeable differences with regard to general academic competencies, such as conducting research or writing a paper. Graduates from the conventional school rated themselves as having slightly more medical knowledge.	-Interpersonal skills -Problem-solving -Self-directed learning -Information gathering -The ability to work and plan efficiently.	Not mentioned
General competencies of problem-based learning (PBL) and non-PBL graduates	Prince et al. 2005 Netherlands	To explore graduates' perceptions of how well their training had prepared them for medical practice and in general competencies. To compare the opinions of graduates from problem-based learning (PBL) and non-PBL schools, because PBL is supposed to enhance general competencies.	A questionnaire.	Responses of 1159 graduates from 1 PBL and 4 non-PBL schools to a questionnaire survey administered 18 months after graduation.	The PBL graduates gave higher ratings for the connection between school and work, their medical training and preparation for practice. According to the graduates, the most frequently used competencies with sufficient coverage during medical training were expert knowledge, profession-specific skills and communication skills. The majority of the PBL graduates, but less than half of the non-PBL graduates, indicated that communication skills had been covered sufficiently. All the graduates called for more curriculum attention on working with computers, planning and organization, and leadership skills. More PBL graduates than non-PBL graduates indicated that they had learned profession-specific methods, communication skills and teamwork in medical school.	-Expert knowledge -Profession-specific skills -Communication skills -Accuracy -Independence -Teamwork skills	<p>The results are based on self-assessment.</p> <p>The response rate was low (45%), but quite reasonable for a large population survey. We are confident that the number of responses was sufficiently large to obtain representative information.</p> <p>Specific attention to such competencies in undergraduate medical training appears to be effective.</p> <p>Other competencies, such as planning and organizing work, need more explicit attention in undergraduate medical training.</p>
A follow-up of medical graduates of a problem-	Antepohl et al.	- Following-up graduates from PBL.	A questionnaire about selected	All 446 medical students who had	They showed a high degree of overall contentment with their undergraduate education	-Communication (with patients)	Despite the fact that the graduates were able to respond anonymously, we cannot rule out the

<p>based learning curriculum.</p>	<p>2003 Sweden</p>	<p>- Graduates' views on the quality of their undergraduate education regarding preparation for their role as practicing medical professionals - Graduates' success or otherwise in obtaining positions during their preregistration periods/ internships and specializations - Research activities among graduates.</p>	<p>activities during their studies and their careers after graduation. They were also asked to evaluate the quality of their undergraduate education retrospectively.</p>	<p>graduated from the new programme were asked to fill in a questionnaire. Out of the 436 who could be traced, a total of 336 graduates (77%) responded.</p>	<p>and felt well prepared for professional life during their preregistration period and specialist education. They felt especially well prepared in terms of skills for communication with patients, collaboration with other health professionals and development of critical thinking/ scientific attitudes. The students' age at the beginning of their studies correlated positively with their contentment as graduates, especially in terms of preparation for patient communication and collaboration with other health professionals.</p>	<p>-Problem-solving -Collaboration (with other HCP) (teamwork) -Critical thinking/ scientific attitudes</p>	<p>possibility that the 23% of graduates who did not return the questionnaire may represent a group with generally more negative attitudes towards the programme. Hence there may be a response bias. _ Generally positive attitude towards the programme might result in a bias concerning retrospective evaluation of the programme. The fact that most teachers at the Faculty of Health Sciences are very positive towards the educational approach and that students at the Faculty receive a lot of (positive) background information about the approach may also contribute to a potential positive bias among graduates. _ With this in mind, it is questionable to what degree graduates' subjective retrospective evaluation of their own undergraduate education can provide relevant information concerning the quality of the programme and its educational approach _ The major limitation of our study, however, may be the fact that our data cannot be compared with data from other schools in Sweden.</p>
<p>Preparedness for hospital practice among graduates of a problem-based, graduate-entry medical program</p>	<p>Dean et al. 2003 Australia</p>	<p>To compare preparedness for hospital practice between graduates from a problem-based, graduate-entry medical program and those from other programs (undergraduate problem-based and traditional)</p>	<p>Survey of graduates (questionnaire) and organisers of clinical training (by semi-structured interview). Graduates' self-reported level of preparedness in the eight domains of the Preparation for Hospital Practice Questionnaire; and organisers' opinions of their strengths and weaknesses.</p>	<p>76(questionnaire) of 108 graduates from the graduate-entry program (70%) and organisers of clinical training at all 17 hospitals participated. T=17 interviewed; clinical training was interviewed at 10 hospitals; intern manager at six, while both were present at the interview at one hospital.</p>	<p>Graduates from the program felt more prepared than did those from other programs in five of the eight domains assessed (interpersonal skills, confidence, collaboration, holistic care, and self-directed learning) and no less prepared in any domain. Organizers rated the graduates highly, especially in clinical competence, confidence, communication and professional skills. Opinions of interns' knowledge of basic sciences conflicted, with strengths and weaknesses mentioned with equal frequency.</p>	<p>Intern -Interpersonal skills -Confidence -Collaboration -Holistic care -Self-directed learning Organization -Clinical competence -Confidence -Communication -Professional skills</p>	<p>_ Participants were the first graduating cohort, with high levels of enthusiasm. The information gained from organisers of clinical training may have been enhanced had the interviews been more structured. _ No weaknesses were recorded for some categories, and it is not known how the context of the interviews may have influenced the results. _ We found the organisers frank in their responses, with some admitting to earlier doubts about what to expect from the new graduates. _ Feedback from other stakeholders about the performance of graduates (eg, patients, other healthcare personnel and colleagues) would have increased the validity of the findings. _ We acknowledge the biases inherent in the qualitative aspect of this study.</p>
<p>Do junior doctors feel they are prepared for hospital practice? A study of graduates from traditional and non-traditional medical schools</p>	<p>Hill et al. 1998 Australia</p>	<p>To evaluate junior doctors' perceptions of the adequacy of their undergraduate medical training to prepare them for hospital practice.</p>	<p>Questionnaire was developed which assesses eight subscales relating to key areas of medical hospital-based work.</p>	<p>Data from 139 (60%) first-year doctors (interns)</p>	<p>Graduates from the problem-based medical school rated their undergraduate preparation more highly than traditional medical school graduates in preparing them for practice in the areas of interpersonal skills, confidence, collaboration with other health care workers, preventive care, holistic care and self-directed learning. These findings persisted when ratings were adjusted for the effects of age and gender. There were no differences between the intern groups for patient management and understanding science.</p>	<p>-Interpersonal skills -Teamworking abilities -Self-directed learning -Confidence -Holistic care -Hill et al 1998</p>	<p>_ The response bias in favor of Newcastle graduates may have influenced the results. _ There were more women in the Newcastle sample, this has been accounted for by using gender as a covariate in the analysis. _ The self-report nature of these data may also have led to rating inaccuracies but would probably have shifted the results in a positive. _ The use of a rating scale as the outcome measure in this study also has its limitations, validity and reliability not with- standing.</p>

Title of the study	Author/ Year/ Country	Aim	Study Design/ Method	Study Sample /Size	Findings	Codes	Limitations
New Graduates' Experiences in Paediatric Private Practice: Learning to Make Intervention Decisions.	Moir et al. (2022) Australia	To explore new graduates' experiences of learning to make intervention decisions in paediatric private practice in Australia.	Case study methodology/semi-structured interviews, observations, informal discussions, reflective journal entries, and review of documents.	11 new graduates and three experienced occupational therapists working in Australian private practices	Themes pervading new graduates' decision-making experiences were: "being seen as capable and competent," "similar and familiar," and "specialist versus generalist positions." Contextual influences contributed to new graduates utilizing their support networks and personal experiences in addition to workplace supports	-The experiences of transition -Preparedness for practice -What helped transition period -Challenging faced during transition period	The first author's insider position may have influenced data analysis and participants' responses. The nature of participant recruitment may have resulted in individuals with strong views or certain experiences of clinical decision-making participating in the research. The nature of case study research and small participant numbers limits the generalizability of the findings. Additionally, seeking support for relational or ethical decisions was not discussed by participants. Therefore, additional research is needed to gain a broader understanding of new graduates' experiences of clinical decision-making in private practice. Furthermore, future research could focus on in-depth analysis of their decision-making processes.
Exploring the transition from student to health professional by the first cohort of locally trained occupational therapists in Ghana.	Opoku et al. (2022) Ghana	To explore the transition from student to clinician, made by the first cohort of locally trained occupational therapists in Ghana.	An interpretive phenomenology approach/in-depth interviews and analysed using an iterative, inductive approach	Six participants were selected using purposive, maximum variation, sampling.	Being 'new' in a new profession, introducing occupational therapy into a new environment, Personal and professional competence, and 'The future is bright'. New graduates found continued professional development activities, such as additional reading, seminars, and conferences, essential for successful transition into practice.	-The experiences of transition -What helped transition period -Challenging faced during transition period	One of the authors was in the same cohort with the participants. Familiarity with the participants might have promoted the establishment of rapport and reciprocity during the interview. The researchers believe that the objectivity, authenticity, and reflexivity of the study was increased because the first author was in the same cohort as the participants. A few potential limitations should be taken into consideration when interpreting the results. Findings are unique to the study participants and might not be transferable to other cohorts of occupational therapy students. The study was retrospective as participants had to reflect on past experiences. A prospective study might better represent participants' experiences of transition as it is happening.
Novice Occupational Therapist's Experience of Working in Neonatal Intensive Care Units in KwaZulu-Natal.	Hardy et al. (2021) South Africa	To explore community service occupational therapists' experiences of working in neonatal intensive care units in the KwaZulu-Natal public health sector	An explorative qualitative design / in-depth interviews Data were analysed thematically by inductive reasoning initially, followed by categorisation via deductive reasoning using the theory of occupational adaptation	Homogenous purposive sampling was employed to recruit 12 therapists.	Three themes emerged; the desire for mastery (including intrinsic drivers, multiple roles, and routines in the NICU and capabilities and prior experiences); demand for mastery (including barriers and enablers in the NICU environment and development of the therapist-client relationship) and press for mastery (development of occupational identity, competence, and adaptation)	-The experiences of transition -Challenging faced during transition period	Transferability is limited due to the study being conducted in the province of KZN with a small sample size. Although the training and experiences of an occupational therapist practicing in KZN may be applicable in various provinces in South Africa, the health system variances, including availability of resources and infrastructure, may also limit transferability. Findings are limited to the experiences of CSOTs between 2014 and 2017, with many participants from the same university, which could have biased the results. A response bias may have been created as occupational therapists with a negative

							attitude towards neonatal intensive care or who felt incompetent in this practice area may not have responded to the invitation to participate.
Experiences of and support for the transition to practice of newly graduated occupational therapists undertaking a hospital graduate Program.	Turpin et al. (2021) Australia	To explore the experiences of new graduates at a major Australian metropolitan hospital occupational therapy department, the support provided to them and their perceptions of this support.	Interpretive Description. Semi-structured interviews	Seven occupational therapists, their team leader, and the Departmental Head	New graduates perceived the transition to practice as overwhelming, particularly regarding their caseload responsibility. During the first few months, work tasks took them longer and they felt stressed and anxious. They received a range of support and education, both inter-professional and discipline specific. Their OT team leader and clinical senior provided tailored support, guidance, and reassurance. Guided questioning facilitated development of new graduates' clinical reasoning and professional skills. Reflection helped them to identify and address learning goals relating to OT professional competencies. New graduates valued having a consistent caseload and a supportive workplace.	-The experiences of transition -Programmes helped transition period -What helped transition period -Challenging faced during transition period	This study explored the experiences of and support provided to graduates undertaking a 12-month graduate programme at a large metropolitan hospital, in which they received substantial support. Such support may not be available in smaller institutions in different locations, or for those not undertaking a graduate programme. The experiences of newly graduated occupational therapists in other situations are not represented in this research and further research is required to explore their needs. This research also focused on the graduates' experiences of their first year of practice and the support they received. It did not collect specific information about their own personal characteristics, behaviours, or strategies (e.g., resilience and coping) and a detailed exploration of this could be an important avenue for further research. The study also provides limited perspectives of the team leader and manager.
Learning thresholds for early career occupational therapists: A grounded theory of learning-to-practise.	Murray et al. (2020) Australia	To develop a theory of how they learn once practising Our research addressed the following two research questions: 1. What aspects of knowledge and practice are troublesome for ECOTs? 2. How do ECOTs respond to troublesome aspects of knowledge and practice?	A constructivist grounded theory of learning-to-practise, interviews, open, focused, and theoretical coding were used to develop a theory.	Interviews, 20 who were either experienced (n = 8), early career OT (n = 10) or in supporting roles for early career OT (n = 2)	The theory of learning-to-practise occupational therapy included four learning thresholds: consolidating professional reasoning; navigating into the workplace; building competence and confidence; and developing a personal theory and practise style. There were 11 strategies identified that early career occupational therapists use to cross the learning thresholds. Early career occupational therapists' understanding, and value of knowledge shifted, which culminated in them 'realising' their personal theory and practice style. They refined their values and beliefs and learned to be more deliberate and reflective in their thinking and actions.	-The experiences of transition -Transmitting of knowledge -What helped transition period -Challenging faced during transition period	It is possible that the ECOT participants were homogenous because they were motivated to participate and appeared to be connected to occupational therapy. While the sample size of 20 participants provided rich data, this is not intended to be fully representative of the profession (Charmaz, 2014). However, the breadth of practice areas and work settings from which the findings were drawn (see Table 1) gives the theory broad applicability. These findings are limited to the Australian context and the occupational therapy profession but may have some resonance with experience in other countries and disciplines. The findings are also limited to the health and social care environments and the models of service delivery during the period of data collection.

<p>Peer Assisted Study Sessions (PASS) preparing occupational therapy undergraduates for practice education: A novel application of a proven educational intervention.</p>	<p>Larkin and Hitch (2019) Australia</p>	<p>To explore the experiences of occupational therapy students, including their perception of its impact on learning and preparation for practice education.</p>	<p>Phenomenological approach, semi-structured interviews, thematically analysed</p>	<p>15 students, 2 of whom were the student leaders</p>	<p>Seven themes emerged from the data: a safe environment; skill development; one of us; feeling connected; student-centred and student-led; different motivations; and learning through leading. Students were positive about the impact of the programme on their confidence and readiness for practice education. Student leaders also reported that it contributed to the development of leadership skills and overall levels of confidence regarding practice education.</p>	<p>-Programmes helped transition period -Preparedness for practice</p>	<p>The study did not investigate the academic or practice education backgrounds of students attending PASS for Placement, unable to determine its effectiveness for students who needed it or higher-achieving students. It also did not conduct longitudinal studies to determine PASS's impact on practice education performance. The self-selection of students and lack of exploration of academic staff's attitudes and experiences could provide valuable insights into barriers and facilitators for implementing an effective program-wide approach to PASS.</p>
<p>Student Perceptions of Growth-Facilitating and Growth-Constraining Factors of Practice Placements: A Comparison between Japanese and United Kingdom Occupational Therapy Students.</p>	<p>Miyamoto et al. (2019) Japanese, UK</p>	<p>Compared growth-facilitating and growth-constraining experiences of practice placements as perceived by occupational therapy students from Japan and the United Kingdom (UK).</p>	<p>Qualitative analysis and simple tabulation (Qualitative data were analyzed following content analysis, the data were not coded but instead directly categorized by a collaborator experienced in qualitative research)</p>	<p>15 students from Japan and 14 from the UK</p>	<p>Japanese and UK students identified five categories: self-reflection, supervisor role, sense of responsibility, clinical knowledge and skills, and time management. Self-reflection and feedback from supervisors facilitated growth, while passive attitudes towards practice placement requirements constraint it. Country-specific differences were observed in clinical knowledge, sense of responsibility, and time management. These differences may be due to different social norms and expectations.</p>	<p>-Programmes helped transition period</p>	<p>Limitations to this study included the small numbers of students from the two cohorts. Therefore, comparisons made cannot fully represent all students in Japan and the UK. There was also the risk of selection bias as students who had a more positive experience on practice placement may have been more interested in participating in this study. Similarly, we did not gather any information on how the students were perceived by supervisors (e.g., positive or successful).</p>
<p>Occupational therapy graduates' reflections on their ability to cope with primary healthcare and rural practice during community service.</p>	<p>Naidoo et al. (2017) South African</p>	<p>Explored the experiences of novice occupational therapy graduates and the extent to which their curriculum had prepared them for practice in PHC settings</p>	<p>Qualitative exploratory study, semi-structured interviews and a focus group. data was analyzed thematically</p>	<p>Thirty-nine novices</p>	<p>Occupational therapy graduates expressed challenges in applying the PHC approaches for practice in resource-restricted rural settings. They required additional skills to communicate in the local indigenous language, to understand the various beliefs of the local communities and to manage change in these settings. They were well prepared for basic clinical skills as a need for urban-based ethical practice.</p>	<p>-Preparedness for practice -Things helped transition period -Challenging faced during transition period</p>	<p>All the participants were graduates from UKZN thus limiting generalizability of the findings. The researcher is embedded within the UKZN programme which served to enhance the understanding of the context however may have influenced participants' responses. It would have been beneficial to explore other DoH employees' perspectives to better understand the service required in the public health sector.</p>
<p>Job Club: A Program to Assist Occupational Therapy Students' Transition to Practice.</p>	<p>Liddiard et al. (2017) Australia</p>	<p>A key aim of the club was the opportunity for graduates to share networking strategies and job seeking experiences. Over time, however, the initiative began to evolve, because of needs, expressed by the graduates, for support in the complex process of transitioning from student to practitioner.</p>	<p>Case Study</p>	<p>0</p>	<p>The Job Club is a valuable opportunity for graduates to reflect on their employment experiences, process expectations, and build connections with their profession. Feedback from attendees indicates that it provides support, networking, and feeling included. The quality improvement survey shows that all graduates find Job Club helpful in catching up with peers, seeking support, and easing the transition from graduate to occupational therapist.</p>	<p>-The experiences of transition -What helped transition period - Programmes (Job Club)</p>	<p>Not mentioned</p>

<p>Transitioning From Occupational Therapy Student to Practicing Occupational Therapist: First Year of Employment.</p>	<p>McCombie and Antanavage (2017). USA</p>	<p>Examined the transition from occupational therapy student to practicing occupational therapist over the course of one's first year of professional employment</p>	<p>Mix, Surveys</p>	<p>202 returned surveys</p>	<p>In general, respondents indicated the transition was positive. Having a mentor was related to high job satisfaction and good clinical fit, while supervising an occupational therapy assistant and low self-confidence were viewed as negative impact factors. Recent graduates presented with lower ratings of a positive transition and higher ratings of likelihood of experiencing burnout and initial job stress than earlier graduates.</p>	<p>-The experiences of transition -What helped transition period -Challenging faced during transition period</p>	<p>The study has limitations, including a low return rate of 40% in postal mail surveys, recall bias, and a retrospective nature. It is important to consider the experiences of older graduates and the complexity of comparing changes in practice between senior and newer occupational therapists. Additionally, the study may have impacted answers to questions about first practice settings, requiring respondents to choose one or combine their experiences. Variations between initial practice settings may also affect comparisons between groups. Further refinement of the survey's face content and validity could involve enlisting a group of practitioners with relevant expertise to critique the survey.</p>
<p>Supporting new graduate professional development: a clinical learning framework.</p>	<p>Fitzgerald et al. (2015) Australia</p>	<p>An occupational therapy clinical education programme within a large public sector health service sought to investigate methods to support new graduates in their clinical learning and professional development.</p>	<p>Action research the steps of planning, action, critical observation, and reflection Qualitative research methods were used to analyse data gathered during the action research cycles.</p>	<p>semi-structured interviews with all CESOs (n = 18)</p>	<p>Action research identified variations in current practices to support new graduate learning and to the development of the Occupational Therapy Clinical Learning Framework (OTCLF). Investigation into the utility of the OTCLF revealed two themes associated with its implementation namely (i) contribution to learning goal development and (ii) compatibility with existing learning supports.</p>	<p>-Programmes (Occupational Therapy Clinical Learning Framework (OTCLF))</p>	<p>The researchers acknowledged the small sample size and cautioned in interpreting the results. The CESO's role in facilitating graduate engagement and providing profession-specific support was not clearly assessed in the pilot research. Further investigation is needed to determine if the OTCLF requires CESO support and how the framework can be used independently by new graduates or supervisors for professional development. The pilot's six-month time frame in the third action research cycle was too short to identify long-term benefits of the framework's recommended components. However, the framework was reported as a cue to goal achievement, with one graduate highlighting the tools' impact. Researchers received feedback on resources and have modified them to provide clarity. Further research is planned to recommend the OTCLF to other allied health professions.</p>
<p>Are final year occupational therapy students adequately prepared for clinical practice? A case study in KwaZulu-Natal.</p>	<p>Naidoo et al. (2014) South Africa</p>	<p>Explores the perceptions of final year OT students and their supervisors, regarding their preparedness to practice as well as their views about the efficacy of the undergraduate curriculum in accomplishing adequate levels of preparedness.</p>	<p>A qualitative design and case study methodology, focus groups and semi-structured interviews, conceptual framework guiding analysis</p>	<p>19 final year students and 7 of their clinical supervisors.</p>	<p>Both students and their supervisors felt they possessed adequate graduate competencies to prepare them for practice. Some concerns related to curriculum content, teaching methods, and relationships with lecturers and clinical supervisors emerged. Students' level of professional confidence was directly influenced by their degree of enjoyment of the fieldwork practical and positive experiences related to this. Supervisors also reported that students display high levels of ethical awareness.</p>	<p>-The experiences of transition - Preparedness for practice.</p>	<p>The study relates directly to the final year occupational therapy students at the University of KwaZulu Natal therefore is not generalisable. However, the issues raised by the study may be applicable to other educational institutions. It was recommended that there be greater collaboration between educators and clinical supervisors. A review of the yearly meeting held with the clinical supervisors should be completed to facilitate greater consensus around rating students and a more congruent expectations of students during fieldwork. Furthermore, a discussion of the more effective teaching strategies to illustrate clinical reasoning should be held between clinical supervisors and educators.</p>

<p>The influence of practice educators on occupational therapy students' understanding of the practical applications of theoretical knowledge: a phenomenological study into student experiences of practice education.</p>	<p>Towns and Ashby (2014) Australia</p>	<p>The study aimed to explore students' perceptions about the influence of practice educators on their understanding of the use of occupation-focussed models in practice.</p>	<p>A qualitative study design, A phenomenological approach/ semi-structured interviews/ Interview transcripts were analysed thematically.</p>	<p>6 participants</p>	<p>Participants' experiences of practice education revealed three themes: explaining the theory-practice nexus, experiencing dissonance between university-based studies and real-world, and creating a positive mindset for using theoretical knowledge in practice. These themes led to active learning, contrasting the importance of theory in university studies and the strategies used by practice educators.</p>	<p>-Start practice (Being practitioner) -Transmitting of knowledge</p>	<p>The study provides a detailed understanding of students' lived experiences of PPE, but its generalizability is limited due to the limited sampling of six students from one Australian university. The study may not be generalizable due to the same university curriculum and similar experiences. Further research could explore how PPE shapes students' perceptions of theoretical knowledge use and assess assessment methods to optimize competencies related to articulating theoretical knowledge.</p>
<p>The competency of New Zealand new graduate occupational therapists: Perceived strengths and weaknesses.</p>	<p>Nayar et al. (2013) New Zealand</p>	<p>This study sought to explore the perceived strengths and weaknesses of newly graduated occupational therapists in New Zealand.</p>	<p>A mixed methods approach, online survey, five focus groups. Descriptive and comparative statistical analyses using Statistical Package for Social Sciences (SPSS), A qualitative descriptive approach</p>	<p>survey 458, 5 focus groups</p>	<p>New graduates were perceived to be strong in the competencies of 'communication' and 'continuing professional development', and weaker in the areas of 'implementation of occupational therapy' and 'management of environment and resources. Perceptions of graduates' preparedness in relation to 'culturally safe practice', 'safe, ethical and legal practice' and 'management of self and people' were mixed.</p>	<p>-The experiences of transition -What helped transition period -Challenging faced during transition period</p>	<p>The electronic survey had a 16.7% response rate, indicating a positive response. However, the results may not be representative of the entire profession, as registered occupational therapists' email addresses may not be up to date. Additionally, some respondents did not complete all survey questions, potentially affecting the reliability of percentages. Despite these limitations, the findings from many New Zealand-based occupational therapists and stakeholders suggest potential issues for further research. The project team struggled to recruit therapists and managers for focus groups due to work commitments. Some participants were approached directly through the team's contacts, which may have influenced their views on new graduate capabilities. The small number of new graduates may have provided more measured responses. Purposive sampling allowed researchers to gather perspectives from employers, educators, and clinicians, a new approach in research addressing new graduates' preparedness for practice.</p>
<p>Preparing novice occupational therapists and physiotherapists for work-related practice: What attributes are required?</p>	<p>Adam et al. (2012) Australia</p>	<p>To identify the knowledge, skills and professional behaviours required by OT and PT novice practitioners from stakeholders in work-related practice. Also aimed to identify stakeholders' perceptions of novice practitioners' competency in these domains.</p>	<p>Self-report survey, descriptive statistics</p>	<p>Respondents (n = 105) included employers, occupational therapists, physiotherapists, and other stakeholders in work-related practice.</p>	<p>Descriptive statistics identified participants' ratings of attributes. Most important attributes were knowledge, anatomy and human function, skills, interpersonal 'communication, and professional behaviours, confidentiality.'. Novice practitioners were rated competent in the most important attributes but not competent in less important attributes.</p>	<p>-Preparedness for practice</p>	<p>The study's limitations include the survey's length and complexity, potential bias in sampling, and the 11-point Likert scale's difficulty in separating factors. Occupational therapists were more likely to comment on occupational therapist new graduate competency than physiotherapists, and the high number of occupational therapist participants (30.5%) may reflect the author's occupational background. Additionally, the 11-point Likert scale's reliability was not affected by the scale's response points, as Matell and Jacoby (1971) stated that different scale response points did not negatively impact validity and reliability.</p>

<p>New graduate occupational therapists' feelings of preparedness for practice in Australia and Aotearoa/New Zealand.</p>	<p>Gray et al. (2012) Australia /New Zealand</p>	<p>The aim of this study was to explore the feelings of newly graduated occupational therapists in Australia and Aotearoa/New Zealand regarding their education and work preparedness.</p>	<p>Online survey which explored their preparedness for work; based on professional competencies.</p>	<p>231. Newly graduated occupational therapists from Australia (n = 178) and Aotearoa/New Zealand (n = 53)</p>	<p>Most newly graduated occupational therapists felt somewhat prepared for practice. However, only 17.1% of Australian new graduates, and even fewer (8.5%) of Aotearoa/New Zealand new graduates felt very well prepared. Participants felt more prepared for the competencies required for 'managing inwards' (including interpersonal skills) and less prepared for those required for 'managing outwards' (including evidence-based practice).</p>	<p>-The experiences of transition -Preparedness for practice</p>	<p>Comparing preparedness across Australian and Aotearoa/New Zealand cohorts is challenging due to differing practice areas. A matched sample would provide a more accurate picture. The questionnaire used 'competent' thread for questions based on Australian and Aotearoa/New Zealand competency standards, but no definition of competence was provided. Responses may reflect participants' subjective feelings and cultural safety values, rather than actual practice competence. The study shows a representative occupational health workforce with 85% to 100% female respondents in Australia and Aotearoa/New Zealand. However, rural and remote areas are significantly higher than AIHW findings, with 30.7% of new graduates in Australia and 37.4% in New Zealand. Accurate response rates across Australian non-registered States were challenging due to lack of definitive information and control over survey distribution. A response rate of 50% of new graduate occupational health was determined due to national registration requirements in Aotearoa/New Zealand. The survey was based on the 1994 competency standards, which were reviewed in 2007-2008 and rewritten in 2009-2010. Future research could use newly available competency standards to reflect perceived competence against current paradigms.</p>
<p>New graduate occupational therapists experience of showering assessments: A phenomenological study.</p>	<p>Glenn and Gilbert-Hunt (2012) Australia</p>	<p>To investigate the experience of new graduate occupational therapists undertaking their first shower assessments in South Australia.</p>	<p>Phenomenological study, semi-structured interviews, analysed according to Giorgi's descriptive phenomenological method</p>	<p>6</p>	<p>New graduates found the shower assessment process cognitively and emotionally demanding. Without prior experience, new graduates lacked confidence to perform the practical aspects of conducting a shower assessment. The sense of responsibility for getting it right and ensuring client safety was at times over whelming. Social norms around nudity, age and gender impacted on the graduate's interaction with clients in the shower environment. However, graduates with previous care attendant work were better able to manage the social and practical challenges inherent in shower assessments</p>	<p>-Preparedness for practice.</p>	<p>While the participants in this study were reflective of new graduate occupational therapists in South Australia, the transferability of the findings are potentially limited due to the small sample size and absence of male participants. Future research could incorporate male therapists to further explore the impact of social expectations around nudity and gender in shower assessments and other activities of daily living. Furthermore, the findings of this exploratory study were not able to be compared with the experiences of other occupational therapists as there is currently a lack of existing literature regarding this area of practice. This lack of research regarding issues of nudity and gender within occupational therapy practice warrants further investigation as the shower assessment is not the only assessment or intervention that requires clients to be naked.</p>

<p>What makes a quality occupational therapy practice placement? Students' and practice educators' perspectives.</p>	<p>Rodger et al. (2011) Australia</p>	<p>This study addressed practice educators' and students' perspectives regarding quality practice placement experiences.</p>	<p>A generic qualitative design/ focus groups or individual interviews</p>	<p>29 students, 41 practice educators and 8 practice education staff members (78)</p>	<p>Key themes described university preparation and processes, a welcoming learning environment, detailed orientation and clear expectations, graded program of learning experiences, quality modelling and practice, consistent approach and expectations, quality feedback, open and honest relationships and supervisor experience and skills.</p>	<p>-What helped transition period -Programmes -Preparedness for practice</p>	<p>Not mentioned</p>
<p>Transition of graduates of the Master of Occupational Therapy to practice.</p>	<p>Seah et al. (2011) Australia</p>	<p>To explore the lived experience of these graduates in their transition from student to practitioner within first six months of practice.</p>	<p>A qualitative study, phenomenological approach, in-depth face-to-face interviews.</p>	<p>8 participants from a recent graduate cohort of the Master of OT</p>	<p>Four themes emerged from the interview data. The themes were (i) valuing maturity; (ii) being new; (iii) needing skills; and (iv) pursuing satisfaction. Participants described metaphors about their experience across and within these themes.</p>	<p>-The experiences of transition -What helped transition period -Challenging faced during transition period -Need to know Need to do</p>	<p>Findings on the transition to practice are related to one specific context, therefore they cannot be generalised to the experience of all GEM OT graduates. Nonetheless, the study reflects similar themes to those published from North America and the Republic of Ireland, suggesting some commonalities in the experience of transition to practice. Although the small sample size was appropriate for a qualitative study (Creswell, 2007), and was like that of landmark studies (Nihill & Gallagher, 2007; Tryssenaar & Perkins, 2001), findings have to be interpreted as descriptive of the eight study participants. Due to the temporal nature of experience, this study was also unable to describe the experience of transition to practice as it happened, but only through retrospective reflection by participants (van Manen, 2001).</p>
<p>From student to therapist: follow up of a first cohort of Bachelor of Occupational Therapy students.</p>	<p>Doherty et al. (2009) Australia</p>	<p>To investigate the perception of graduate students on their preparation for practice, at 7 months post-graduation.</p>	<p>Quantitative, anonymous postal questionnaire</p>	<p>18 respondents (58% response rate)</p>	<p>A study found a significant positive relationship between respondents' perception of their curriculum and fieldwork experiences and their preparation for practice. Block placements were rated more beneficial than non-traditional placements, but non-traditional placements were significantly related to practice preparation. Community-based graduates had higher self-competence and confidence in clinical decision-making, while undergraduate programs prepared respondents to enter the workforce and practice as occupational therapists.</p>	<p>- The experiences of transition - Preparedness for practice - What helped transition period - Challenging faced during transition period</p>	<p>The study on student experience transitioning to practice is limited in generalisability to other student populations due to its focus on one graduating class from one undergraduate program. Self-reporting data may not accurately represent graduate perceptions or experiences, and the survey focused on self-perception of competence without objective measures. The sample size of the study, with a 58% response rate, is limited, and the views of those who did not respond are unknown. The study's sample size is also limited, and the views of those who did not respond are unknown.</p>
<p>Contextual factors that have an impact on the transitional experience of newly qualified occupational therapists.</p>	<p>Morley (2009) UK</p>	<p>The programme was evaluated using mixed methods within a realist framework to understand the contextual factors that have an impact on the transitional experience of NQOTs and their engagement with the programme.</p>	<p>Mixed method, Semi-structured interviews, questionnaire (Morley et al 2007), template analysis</p>	<p>4 pairs of NQOTs and 6 supervisors</p>	<p>The findings suggest that the demands placed on new practitioners are increasing, with early expectations of autonomy within an interprofessional context. Strategies that assist transition include co-working, role modelling and informal support. The preceptorship programme facilitates the provision of these.</p>	<p>-The experiences of transition -What helped transition period -Challenging faced during transition period</p>	<p>The author was an insider-researcher, making it difficult to critique the research process. There was potential for conflict between the author's roles as manager and as researcher and inadvertent bias was inevitable. The triangulation of data on time, space and person was used to confirm themes in the data and to reduce bias (Curtin and Fossey 2007). Several methods were used to ensure an accurate representation of participants' perspectives, including reflexivity, the use of quotations in the text and a coherent audit trail. The perspectives of those who valued</p>

							the programme and those who disengaged were presented to increase representativeness.
Graduates' reflections on their preparation for practice.	Robertso and Griffiths (2009) New Zealand	This New Zealand study explored new graduates' perceptions of how well they had been prepared for practice, using three focus groups of graduates from one occupational therapy programme.	Qualitative descriptive approach, focus group, thematic inductive analysis	3 focus groups were organised, each with 5 to 8 participants	New graduates face issues like role clarity, inadequate supervision, and uncertainty in team responsibility. They lack confidence in their ability to research and find information, despite feeling confident in their ability to address gaps in knowledge. Study highlights the importance of learning to be an occupational therapist, contextualizing knowledge, and preparing for graduation. New graduates face challenges in role clarity, supervision, skills, and team responsibility, with lack of confidence being the primary issue.	-The experiences of transition -Preparedness for practice	One of the risks of a dynamic social group is that there may be a superficial consensus, with some members deferring to those who are most outspoken. As Berg (2001) noted, it is also possible that some will take a more extreme view when compared with responses gathered in methods such as a survey. Another reason that these findings should be treated with caution is that the study was retrospective, and it is known that memories may be misconstrued based on later experiences. What was notable was that all the participants could recall being a new graduate: this is a highly emotive experience. Also, it is acknowledged that these results represent the views of the graduates from one occupational therapy school so may not be relevant for all graduates.
Four years after graduation: Occupational therapists' work destinations and perceptions of preparedness for practice.	Brockwell et al. (2009) Australia	The present study sought to identify the work destinations of graduates and ascertain their perceived preparedness for practice from a regional occupational therapy program	Questionnaires and semi structured in-depth telephone interviews, these data were analysed manually to obtain frequencies and percentages (questionnaires). Manual thematic analysis (interviews)	Graduates (n=15)	The study also offered some insights into the value that therapists placed on the subjects taught during their undergraduate occupational therapy training and had highlighted the differences in perceptions between therapists with rural experience and those with urban experience regarding the subjects that best prepared them for practice.	-Preparedness for practice.	Study limitations include a small sample size and potential for selection and recall bias. While the results need to be viewed with some caution, they do highlight areas for potential exploration, including the characteristics of rural student clinical fieldwork placement experiences as barriers or facilitators to career destinations and the personal characteristics of students.
Supporting the transition from student to professional—a case study in allied health.	Smith and Pilling (2008) Australia	Implementation and outcomes of a structured program for allied health practitioners making the transition from student to professional. Describes three cycles of a program designed.	Case study	Allied health staff, including 11-13 graduates from various disciplines.	Participants found the program's major strengths, such as a supportive forum, multi-professional peer support, and the opportunity to learn about other disciplines and campuses. The facilitator's program was helpful, and the mix of information and debriefing opportunities was positive. However, they identified areas for improvement, such as reducing sessions, balancing structured activity and open debriefing, following up tasks, and managing competing demands.	-What helped transition period - Programmes (allied health graduate program)	Not mentioned
Occupational therapy students' and graduates' satisfaction with professional education and preparedness for practice.	Hodgetts et al. (2007) Canada	This paper presents the perspectives of occupational therapy students and graduates regarding satisfaction with their professional education and preparedness for practice.	Surveys, focus groups, and telephone interviews/ Statistical Package for Social Sciences (version 12.0) Mann-Whitney U, chi-square, content analysis	Quantitative data (n=159 early in program) (n=85 near graduation), qualitative data (N=33), (N=22 Recent graduates)	Both students and recent graduates reported that they felt they lacked technical, intervention skills. Longer-term graduates were comfortable with their knowledge and skills, especially their ability to provide individualized intervention. Overall, students and graduates were satisfied with their education; however, it appeared to take between six months and two years of clinical practice for therapists to feel clinically competent.	-Preparedness for practice -Things helped transition period -Challenging faced during transition period	This study involved all students and graduates, but participants may not be representative of all students, recent graduates, or long-term graduates. Volunteer bias is possible, and the results were consistent across cohorts from different years, supporting the validity of the findings. This study's also limitations include not specifically addressing satisfaction with professional education and preparation for practice among recent and longer-term graduates. However, open discussion and telephone interviews led to

							discussions on satisfaction with the program and potential improvements to address current practice.
Developing a preceptorship programme for newly qualified occupational therapists: action research.	Morley (2007) UK	Explore the experiences of five newly qualified OT, four supervisors, and five managers, identifying their perceived development needs and the mechanisms supporting or hindering their meeting.	This action research study used three focus groups and one interview, analysed using template analysis (Kazi 2003)	5 recently qualified occupational therapists, 4 supervisors and 5 OT managers.	The recently qualified occupational therapists experienced satisfaction at making a difference in their first posts. However, for some, their first post had fallen short of their expectations because they faced challenges when moving from student to practitioner, sometimes with limited support. The participants identified development needs that they felt were common to other new practitioners and the factors that constrained or enabled the meeting of these needs.	- Programmes (Preceptorship)	Action research has been criticised for a lack of validity, reliability, and objectivity by positivist researchers (Winter and Munn-Giddings 2001). The approach seeks to respond to a local practice situation rather than to produce generalisable knowledge, and the researcher provides a thick description of the setting to capture its complexity to facilitate the reader's interpretation and inform whether the findings may transfer to other settings (Rolfé et al 1999). The study involves a small number of participants from one organisation and a longer timeframe would have allowed the gathering of more data in greater depth and across other settings, such as rural trusts.
Before preceptorship: new occupational therapists' expectations of practice and experience of supervision.	Morley et al. (2007) UK	This article reports a questionnaire-based survey conducted with 45/74 (61%) newly qualified occupational therapists based in London.	Quantitative, questionnaire	45/74 (61%) newly qualified occupational therapists	The respondents reported high initial expectations of their first posts, particularly about professional supervision and client care, which varied according to their age and education. Most (76%) received weekly professional supervision, focused on primarily clinical issues, although this did not always reflect the respondents' desired time use. Although varied development opportunities were cited, the respondents spent little time with their senior colleagues.	- The experiences of transition - What helped transition period - Challenging faced during transition period	This study has several limitations, including a small sample of convenience workers in a single location, the first author's expertise in the area, an acceptable questionnaire return rate of 61%, and unclear questionnaire elements. The scale provided more positive comments than negative ones, and the data scoring system worked well from a statistical perspective, but the results were counterintuitive. Despite these limitations, the urban and largely mental health context of the study may provide insights for practitioners, managers, and policymakers. The findings may be useful for practitioners, managers, and policymakers in other settings.
The challenge of working in mental health settings: Perceptions of newly graduated occupational therapists.	Lloyd et al. (2007) Australia	This study investigated the specific challenges that new graduate occupational therapists are faced with when commencing work in a mental health setting.	Qualitative, semi-structured interviews, consensual qualitative research approach	15 newly graduated OT	Three domains were identified from the transcripts. The first related to the ideas of the participants about the skills and knowledge needed by new graduates commencing mental health practice; the second related to the extent to which undergraduate studies had prepared them for practice; and the third related to how they acquired capacity to practise and overcame deficits in skills and knowledge.	- Preparedness for practice	This study has several limitations, including a small, geographically limited sample of new graduate occupational therapists working in mental health services in south-east Queensland. The results cannot be generalized, as they are representative of new graduates and may not reflect the views of members of OT Australia. Additionally, the sample is predominantly female, and the types of questions asked may have influenced participants' responses to challenges. It is also unclear if males would have reflected the same issues.

<p>New graduates' experiences of learning to practise occupational therapy.</p>	<p>Toal-Sullivan (2006) Canada</p>	<p>Findings from a qualitative study of six OTs in the first year of their career, with a focus on the experience of transition and how beginning practitioners learn about doing practice.</p>	<p>Qualitative study, phenomenology, interview and maintained a journal for one month</p>	<p>6 OT in the first year of their career</p>	<p>The transitional experiences of the participants revealed that they were challenged by their limited practical experience, the responsibilities of client care, system issues and role uncertainty. The support of colleagues and peers was critical to their learning and eased their adjustment from student to occupational therapist. The relationship with clients was particularly valuable to the participants' learning and professional identity.</p>	<p>-The experiences of transition -What helped transition period -Challenging faced during transition period</p>	<p>Not mentioned</p>
<p>Starting out in rural New South Wales: the experiences of new graduate occupational therapists.</p>	<p>Lee and Mackenzie (2003) Australia</p>	<p>This qualitative study aimed to explore the experiences of five new graduate occupational therapists who began their careers in rural New South Wales (NSW).</p>	<p>Qualitative, semi-structured, individual interviews, themes</p>	<p>5</p>	<p>New graduates are attracted to rural positions due to factors such as their previous rural experience, low self-confidence, and the rewards and challenges of rural practice. They value these aspects as opportunities for skill development. To attract more graduates, increasing the number of occupational therapy graduates with rural experience and enhancing support for new graduates in rural positions could help retain them in rural practice.</p>	<p>-The experiences of transition -What helped transition period -Challenging faced during transition period</p>	<p>Due to the small sample size and the qualitative methodology, the findings are unique to these participants are not easily generalised.²¹ The selection process for participants also excluded new graduates who were non-members of NSWAOOT. The impact of this on study findings is uncertain. Due to time and travelling constraints to conduct interviews, it was only possible to complete a single interview with each therapist, although member checks and a telephone interview were completed to clarify data overcame this limitation. Definitions of 'rural' may also limit the applicability of these findings to the broad rural environment.</p>
<p>Australian occupational therapy practice in acute care settings.</p>	<p>Griffin and McConnell (2001) Australia</p>	<p>To explore the nature of Australian occupational therapy practice in acute care settings</p>	<p>Questionnaires</p>	<p>226 OTs and yielded a 64.7% response rate.</p>	<p>Therapists focus on self-care as a primary client need, with initial interviews being the most common assessment procedure. Client education is the most common intervention. Key skills for effective practice in acute care include time management, quick clinical reasoning, and lateral thinking. Workplace characteristics include a cooperative healthcare team and early referral. Supportive senior therapists and a well-resourced equipment pool are crucial resources. Interdisciplinary teams and experienced therapists have more positive attitudes, while younger therapists have concerns about their ability to provide more. Graduates need better preparation and realistic expectations, and department managers should ensure adequate support from senior therapists.</p>	<p>-Preparedness for practice -Things helped transition period -Challenging faced during transition period</p>	<p>Some H10 of this study include the large proportion of women in the sample, the fact that therapists' choices were forced by using predetermined lists of items to rank, and that therapists self-assigned their team to one of the descriptions. While this study used an Australian sample, some of the results are like those in a British study of new graduates' transition to clinical practice (Rugg, 1996).</p>
<p>From student to therapist: Exploring the first year of practice.</p>	<p>Tryssenaar and Perkins (2001) USA</p>	<p>This study used a phenomenological approach to explore the lived experience of rehabilitation students during their final placement and first year of practice.</p>	<p>Phenomenological approach, reflective journals, themes</p>	<p>Students (n = 6)</p>	<p>The lived experience of the first year of practice included four consecutive stages: Transition, Euphoria and Angst, Reality of Practice, and Adaptation. Themes from the journals included great expectations, competence, politics, shock, education, and strategies.</p>	<p>-The experiences of transition</p>	<p>The study involved 6 female volunteers from a class of 120 students who maintained journals for over a year. These volunteers may have unique personal traits and were more introspective than non-volunteers or dropouts. Some participants identified altruistic reasons for participating, aiming to further their knowledge about novice practice. The study does not cover the transition experiences of male therapists or nontraditional</p>

							students, as published first-person accounts were also by women. Further research is needed to determine if other groups of novice therapists experience similar transitions. Additionally, studies targeting support and professional practice stages for novice therapists may be beneficial.
Transition from student to practitioner: The role of expectations, values and personality.	Sutton and Griffin (2000) Australia	investigated immediately prior to graduation with respect to their expectations about working as an occupational therapist, their work values and their work preferences.	Longitudinal study, questionnaire	The respondents (n=295)	Students hold inflated expectations about their first job and retain traditional occupational therapy values. Demographic and personality profiles of international students can help predict these expectations. Students had high expectations for their work conditions, including supervision and performance feedback. They had positive expectations about peer interaction and extended work groups but were equivocal about the size of their work unit. Student expectations are often inflated, potentially causing higher unmet expectations and lower job satisfaction.	-The experiences of transition -Preparedness for practice	An advantage of this study is that it measures expectations about not only organisational entry but also occupational entry. However, the measure may also have resulted in more inflated expectations. Simply by asking students about their expectations, the researcher in part influences student expectations. It may be that in the absence of experience, the more explicit and specific the question the more likely it is that students will answer conservatively. The tool used to measure student expectations was based on the 3 factor/13 component factor structure discussed by Porter and Steers (1973) and served to provide a preliminary test of their assertions. Although only partial support for this structure was provided, analysis was limited to cross-sectional data and tests of reliability. It is anticipated that analysis of future longitudinal data from the same sample using exploratory factor analysis will provide a more robust test of this structure.
Junior occupational therapists' continuity of employment: What influences success?	Rugg (1999) UK	This article details a study that investigated the influence of selected personal and environmental variables on British occupational therapists' continuity of employment one-year post-qualification.	Mixed method	Data were gathered using purpose-designed questionnaires and a semi-structured interview. (206)	The results linked respondents' retention in practice to issues of support, resources, success with clients, job satisfaction and the extent to which work matched their personal values. Respondents' withdrawal from practice was linked to issues of support, autonomy, and a perceived discrepancy between their expected and actual practice. Their level of perceived responsibility was also cited as influential.	-The experiences of transition	The study's methodology had some limitations, including the less popular occupational stress scale by which prevented a direct comparison with other research. The study also equated respondents' failure to enter or remain in practice for one year with their permanent loss to the profession, which cannot be substantiated due to the limited duration of the study. Additionally, the respondents were all volunteers, small and not randomly selected, raising concerns about the generalizability of the findings. This method was chosen to optimize respondents' retention, as other studies with unknown respondents achieved response rates of half or less. The author's dual role as researcher and academic may have influenced the study findings, as they used various methods to reduce potential conflict, such as approaching respondents only after the researcher's responsibility for their academic assessment was over, protecting their anonymity, and viewing them in a location of their choice. Despite these limitations, respondents showed no apparent discomfort or reticence in their answers.

The lived experience of becoming an occupational therapist.	Tryssenaar (1999) UK	This paper describes the lived experience of becoming an occupational therapist.	Phenomenological approach, semi-structured interviews and the reflective writings	1	Maggie's journey towards professional identity is reflected in three themes: rose-coloured glasses, the impact of reality, and onward and upward. She shares her initial delight in her work, frustrations and discouragement, and a sense of hopefulness for the future. These themes resonate with her own journey as an occupational therapist, a still unfinished one.	-The experiences of transition	Not mentioned
New graduates: perceptions of their first occupational therapy position.	Hummell and Koelmeyer (1999) Australia	The study investigated the perceptions of 74 occupational therapists 6 months after graduating from the University of Sydney.	Questionnaire	74 OTs	Over three-quarters were provided with an orientation programme at the workplace and were satisfied with their initial job, although they perceived it as stressful. Two-thirds received support and supervision from senior occupational therapists; however, one-third did not. The provision of support/supervision from a senior colleague was of critical importance to the successful transition from student to graduate.	-The experiences of transition	The limitations of this study need to be considered when examining the results. Students from only one Australian university were surveyed which limits the generalisability of the results. The disadvantages of postal surveys include that they may not be completed in order or by the person for whom they were intended, which may have a negative impact upon the results (Bourque and Fielder 1995). The study is also limited by reliability and validity issues, although measures were taken to promote these aspects of the questionnaire.
Occupational therapists' perceptions of their undergraduate preparation for the workplace.	Adamson et al. (1998) Australia	The present study investigated the perceptions of 144 graduate OT regarding the adequacy of their undergraduate education at the University of Sydney in equipping them for the workplace.	Questionnaire	Completed by 144 of the 502 occupational therapy graduates	The findings indicated that occupational therapy graduates perceived significant gaps between the knowledge and skills gained during their undergraduate course and those required in the workplace, particularly in the areas of communication with other health professionals and the public, knowledge of the health industry and workplace management.	-Preparedness for practice	The results, however, may be considered more broadly. Firstly, the skills specified as essential by the workplace respondents may be evaluated according to whether they should be incorporated into undergraduate curricula for occupational therapists at this university, but they may also provide a focus for broader occupational therapy curriculum evaluation. The skills reflect the views of practitioners concerning the workplace requirements of occupational therapy generally and do not merely of those graduating from the university of Sydney.
A longitudinal study of occupational therapy new practitioners in their first years of professional practice: Preliminary findings.	Atkinso and Steward (1997) UK	The experiences of the first cohort of OT graduates from the School of OT and PT. It addresses factors related to the graduates' choice of first post, their perceived level of preparation for practice and their involvement in continuing education.	Questionnaire, interview (The focus of the interviews was the transition from student to practising occupational therapist.)	25 out of a of 27 students responded to questionnaire. interview a small sample of 3.	The preliminary findings from the pre-leaving questionnaires and the early post-qualifying questionnaires are presented in three sections: choice of first post, preparation, and continuing education. It is anticipated that the data obtained from the interviews conducted in November 1994 will form the content of another article.	-Preparedness for practice	These were addressed throughout the process of the study design and the data analysis. A possible bias might have been introduced by the researchers being past lecturers of the new practitioners and this is perhaps a limitation of the study
The transition of junior occupational therapists to clinical practice: Report of a preliminary study.	Rugg (1996) UK	Investigated the feasibility of identifying the factors that influenced OTs decision to practise, or cease to practise, within one year of qualification.	longitudinal study, quantitative, questionnaires, Outcome measures included turnover and withdrawal from practice (attrition)	Respondents (n=177)	The further exploration of early with-retail practice among junior occupational therapists is necessary due to the lack of evidence. Some therapists struggle with expectations and practice experience, and the possibility of problems exists. The researcher believes that further exploration is warranted, and a study is currently underway to investigate this issue.	-The experiences of transition	Not mentioned

Appendix 5: Study characteristics, databases results and example of criticism.

Eight of the studies were purely qualitative in design (Wormley et al. 2019; Nallen et al. 2018; McMahon et al. 2016; Whitcombe 2013b; Gunn et al. 2012; Williams et al. 2012; Spalding and Killett 2010; Chikotas 2009). Six were quantitative in design (Applin et al. 2011; Schmidt et al. 2006; Hill et al. 1998). Three were unclear in terms of the methodology used (Leahy et al. 2006; Prince et al. 2005; Antepohl et al. 2003); however, they collected data through a survey (questionnaire), so they were considered to be using a quantitative method. Another four studies were classified as follows: two were cohort studies (Bar et al. 2018; Reeves et al. 2004), one was a case study (Consul and Medina, 2014), and Cheng (2009) and Dean et al. (2003) were unclear in terms of the methodology used, but as they collected data through a survey with follow-up qualitative interviews, it suggests a mixed methods design.

In terms of the locations of these studies, three of the qualitative studies were conducted in the UK, two in the USA, two in Ireland, and one in Canada. One of the cohort studies was undertaken in the UK, and the other in Israel. The case study was conducted in Spain. For the quantitative studies, two were from the Netherlands, one from Canada, one from the UK/Ireland, one from Sweden, and one from Australia. A mixed methods study was conducted in Hong Kong and Australia. It can be seen that most of the research was conducted in developed countries such as Britain, the United States, Canada, Australia, the Netherlands, Spain, and Ireland, where problem-based learning was established as a teaching method, and its effect on practice was explored. Bar et al. (2018) conducted a cohort study in the Middle East region with a focus on occupational therapy (OT) prescriptive. However, their study did not address a clearly focused issue, as it had many different aims, including evaluating the relationship between grades in clinical fieldwork studies and in the PBL course, comparing the PBL grades obtained by OT students who are Arabic speakers with Hebrew speakers, describing quantitatively the PBL program at Tel Aviv University, and the challenges of implementing such a program.

Four studies were from an occupational therapy perspective (Bar et al. 2018; Whitcombe 2013b; Spalding and Killett 2010; Reeves et al. 2004), four were from nursing (Consul and Medina 2014; Williams et al. 2012; Applin et al. 2011; Chikotas 2009), three were from physiotherapy (Wormley et al. 2019; McMahon et al. 2016; Gunn et al. 2012), five were from medicine (Schmidt et al. 2006; Prince et al. 2005;

Antepohl et al. 2003; Dean et al. 2003; Hill et al. 1998), one each for speech and language (Leahy et al. 2006), midwifery (Nallen et al. 2018), and dental hygienists (Cheng 2009).

The focus of the studies was somewhat diverse. The qualitative studies addressed a range of issues, such as students' experiences of PBL, their professional identity and knowledge (Whitcombe 2013b), the nurse clinical practice and its meaning (Chikotas 2009), how graduate nurses describe their contribution to professional practice (Williams et al. 2012). Others focused on how the skills of physiotherapy students are applied in practice from the perspective of placement supervisors (Gunn et al. 2012), physiotherapy perceptions of primary healthcare practice transition (McMahon et al. 2016), the impact of Enquiry-Based Learning on midwifery clinical practice (Nallen et al. 2018), and the description, interpretation, and understanding of core value development in a modified PBL program for doctoral physical therapy students (Wormley et al. 2019). Additionally, Spalding and Killett (2010) aimed to identify and evaluate OT students' views of the effectiveness of PBL practice placement in facilitating their learning. This study was not directly related to practice; however, the author discussed the potential value of the PBL experience for students during the transition period to become qualified OTs.

Bar et al. (2018) OT cohort study had multiple aims, including an evaluation of the relationship between grades in clinical fieldwork studies and in the PBL course, and Reeves et al. (2004) aimed to identify graduates' views on how PBL affects their professional practices after their qualification. However, while Reeves et al. (2004) is considered an important study as it's from an OT perspective and has addressed the effects of PBL on practice, the study's design seems inaccurate, as a qualitative study design should focus more on the views and experiences of the participants.

The case study by Consul and Medina (2014) was from the perspective of nursing professionals who had graduated with a competency-based and integrated approach through PBL to identify strengths and weaknesses in their competence. Moreover, the mixed studies aimed to explore how well dental hygienists apply PBL skills in their workplace and whether they continue to use those skills (Cheng 2009) and compared preparedness for hospital practice between different graduates of medical programs (Dean et al. 2003).

The remaining studies were quantitative, and their goals varied. They aimed to define if there is a difference in self-reported competency between nursing graduates of non-PBL and PBL programs (Applin et al. 2011), the perceptions of PBL students as an educational strategy in preparation for clinical work for speech and language therapists (Leahy et al. 2006), perceptions and evaluation of junior doctors on their adequacy of preparation for hospital practice (Hill et al. 1998), investigate the long-term effects of PBL on the professional competencies of graduate doctors (Schmidt et al. 2006), following up graduates from PBL (Antepohl et al. 2003), and explore how well graduates' training had prepared doctors for general competencies and medical practice (Prince et al. 2005).

Given the aims of the various previous studies, especially the qualitative studies, there was only one study that explored the lived experience of qualified practitioners regarding the PBL method and the meaning of that education on current clinical practice (Chikotas 2009). However, this study was not from an OT perspective (but from a nursing perspective), and the methodology used was phenomenology but not interpretative phenomenological analysis (IPA). Moreover, the study focused on current clinical practice, which means the participants might have long experience in practice and are qualified; however, this thesis will focus on the internship period, which is considered a transition period for students who are not yet qualified.

Study methodologies

Although the qualitative studies have different methodologies, none of them considered using IPA. Most of the studies were qualitative in general and did not mention what type of qualitative study was used (Nallen et al. 2018; Whitcombe 2013b; Gunn et al. 2012; Spalding and Killett 2010). Two were phenomenological studies (Wormley et al. 2019; Chikotas 2009), and the only ethnographic study was conducted by Williams et al. (2012), with framework analysis by McMahon et al. (2016). Although the results of the qualitative studies cannot necessarily be generalized or transmitted to other groups and settings, this recruitment of participants may positively reflect the impact of the PBL experience on the participants' identity and its relevance to practice. Moreover, most qualitative research used a purposive and small sample, with

information gleaned from one PBL context, thus it might not be representative of all OT PBL settings or contexts.

Bar et al. (2018) used a retrospective cohort study, and Reeves et al. (2004) used a longitudinal cohort study. In spite of that, a prospective cohort study might collect information on additional factors that influence PBL achievements on students' learning styles or their practice. Furthermore, since Bar et al.'s (2018) study was a retrospective study, some information regarding the participants, such as anxiety levels, self-efficacy, previous academic experience, personal values and beliefs, socioeconomic status, was unavailable.

Consul and Medina (2014) applied an intrinsic case study, and both Dean et al. (2003) and Cheng (2009) studies were unclear about the methodology they used and did not state that they used a mixed methodology; this is considered a major issue in terms of the dependability of their study. However, they collected the data through a survey and follow-up group interviews; thus, it is considered a mixed method.

The rest of the studies were considered quantitative. One study was comparative descriptive (Applin et al. 2011), and one was a preliminary study design (Leahy et al. 2006). Although the methodology was not clear in their articles, questionnaires were used to collect the data. Hence, the majority of students in Leahy's et al. (2006) study regarded PBL as directly relevant for clinical preparation, and several significant themes emerged from the answers to the questionnaire in Applin's et al. (2011) study (which included both open-ended questions and forced-choice questions). They asked graduates how their nursing programs prepared them to meet the entry-to-practice competencies and what program improvements they might suggest.

Finally, Schmidt et al. (2006) and Hill et al. (1998) used a questionnaire without open-ended questions, while Prince et al. (2005) and Antepohl et al. (2003) had open questions; thus, it was considered a quantitative methodology. As specific response patterns were suggested, and participant agreement was extracted from the results of smaller-scale studies; therefore, the results of these quantitative studies do not simply reflect the personal beliefs (idiosyncratic) of the participants, as in a qualitative study, but rather represent valid observations of participants and others in the relevant professional situations.

Databases result

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Critical appraisal example

Topic		Screening Questions				Is it worth continuing? Detailed questions										T						
Question		1. Was there a clear statement of the aims of the research? HINT: Consider What was the goal of the research? Why it was thought important? Its relevance?	Y E S C A N N O T T E L L	2. Is a qualitative methodology appropriate? HINT: Consider If the research seeks to interpret or illuminate the actions and/or subjective experiences of research participants? Is qualitative research the right methodology for addressing the research goal?	Y E S C A N N O T T E L L	3. Was the research design appropriate to address the aims of the research? HINT: Consider If the researcher has justified the methods chosen? (E.g. have they discussed how they decided which method to use)?	Y E S C A N N O T T E L L	4. Was the recruitment strategy appropriate to the aims of the research? HINT: Consider If the researcher has explained how the participants were selected? If they explained why the participants, they selected were the most appropriate to provide access to the type of knowledge sought by the study? If there are any discussions around recruitment (e.g. why some people chose not to take part)?	Y E S C A N N O T T E L L	5. Was the data collected in a way that addressed the research issue? HINT: Consider If the setting for data collection was justified? If it is clear how data were collected (e.g. focus group, semi-structured interview etc.)? If the researcher has justified the methods chosen? If the researcher has made the methods explicit (e.g. for interview method, is there an indication of how interviews were conducted, or did they use a topic guide)? If methods were modified during the study, if so, has the researcher explained how and why? If the form of data is clear (e.g. tape recordings, video material, notes etc)? If the researcher has discussed saturation of data?	Y E S C A N N O T T E L L	6. Has the relationship between researcher and participants been adequately considered? HINT: Consider If the researcher critically examined their own role, potential bias and influence during (a) Formulation of the research questions (b) Data collection, including sample recruitment and choice of location. How the researcher responded to events during the study and whether they considered the implications of any changes in the research design?	Y E S C A N N O T T E L L	7. Have ethical issues been taken into consideration? HINT: Consider If there are sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained? If the researcher has discussed issues raised by the study (e.g. issues around informed consent or confidentiality or how they have handled the effects of the study and whether the implications of any changes in the research design?)	Y E S C A N N O T T E L L	8. Was the data analysis sufficiently rigorous? HINT: Consider If there is an in-depth description of the analysis process? If thematic analysis is used, if so, is it clear how the categories/themes were derived from the data? Whether the researcher explains how the data presented were selected from the original sample to demonstrate the analysis process? If sufficient data are presented to support the findings? To what extent contradictory data are taken into account? Whether the researcher critically examined their own role, potential bias and influence during analysis and selection of data for presentation?	Y E S C A N N O T T E L L	9. Is there a clear statement of findings? HINT: Consider. If the findings are explicit? If there is adequate evidence both for and against the researchers' arguments? If the researcher has discussed the credibility (rigour) of their findings (e.g. triangulation, respondent validation, more than one analyst)? If the findings are discussed in relation to the original research question?	Y E S C A N N O T T E L L	10. How valuable is the research? HINT: Consider If the researcher discusses the contribution the study makes to existing knowledge or understanding e.g. do they consider the findings in relation to current practice or policy?, or relevant research-based literature? If they identify new areas where research is necessary? If the researchers have discussed whether or how the findings can be transferred to other populations or considered other ways the research may be used	Y E S C A N N O T T E L L	10
		An evaluation of a problem-based learning experience in an occupational therapy curriculum in the UK. Spalding and Killett 2010 UK	The objectives of the study were to evaluate an adapted approach to problem-based learning (PBL) on a preregistration master's course in Occupational Therapy at the University of East Anglia in the UK.	The intention in this paper is to present adapted PBL with some initial findings following an evaluation with two student cohorts.	The value of this hybrid of PBL during the period of transition from student to qualified occupational therapist is discussed	The purpose of this evaluation was to assess the students' views of the efficacy of PBL as a learning approach. It was hoped that the evaluation would establish if PBL was facilitating the students learning as anticipated.	Questionnaires were administered to gather students' views of their experiences. Focus groups A session was timetabled with each cohort for the purpose of discussing the questions and responses from the questionnaire further.	An evaluation was carried out with two second year OT MSc students on their experiences of placement PBL in their second year.	Not clear if they used purposive sample	Questionnaires were administered to gather students' views of their experiences. The advantage of questionnaires was that they would enable the students to give anonymous feedback. This, it was hoped, would increase the response rate given the small cohort number, and help with honesty in responses. A questionnaire was administered at the end of a normal timetabled session for them to complete within 1 week. The completed questionnaires were returned to the first author who briefly reviewed them prior to a time-tabled focus group.	A session was timetabled with each cohort for the purpose of discussing the questions and responses from the questionnaire further. The authors took notes during the discussions. The meeting took the form of a focus group so that themes identified in the questionnaire responses could be validated and discussed further. Initial ideas for making changes to improve placement PBL could also be discussed. The potential advantage of this method was that it resembled their PBL learning experience. Consequently, they were familiar with discussions in this group, and it could help them to focus on the process they were discussing.	Data saturation was not mentioned	Both evaluators were the PBL facilitators (and the first author was their course director). Therefore, students might have been reticent to give honest feedback. However, the form was anonymized and previous interactions with the students had not shown them to hold back on critiquing their study experiences. The focus groups were large (15), so although these groups replicated their PBL group experience, the large number may have limited everyone's equal involvement.	Ethical approval was not required as this was part of the normal process for module evaluation.	No mention how data was analyzed.	A judgement about the continued use of placement PBL can be determined; good practice recognized, celebrated and continued; and changes can be proposed for improving perceived weaknesses.	1-Real cases (that they would be working with when qualified); (2) Real practice (what actually happened for peers); (3) OT for specialized cases (advanced learning); (4) Collaborating with their peers who are seen as experts (because they have worked with the case person); (5) Balancing workload; and (6) Appreciation of their own progress from novice to competent practitioner.	Not discussed the credibility or the (rigour) of the research.	Placement PBL was seen to provide current, relevant and complex learning scenarios that help students to move from a theoretical understanding to application of theory in the complexity of actual service situations. The authors conclude that placement PBL has the potential to prepare students for the transition from student to qualified practitioner. Further research is indicated for ongoing evaluations of the effectiveness of PBL in helping students to become confident occupational therapy clinicians, and comparative studies with other learning approaches.	Y E S	6.5	
2	Problem-based learning students' perceptions of knowledge and professional	The present study explored students' perceptions of knowledge, how PBL shapes that perception and whether this	This research explored occupational therapy students' perceptions of knowledge and their professional	The choice of the research design reflected the nature of the research questions and since the interest lay in interpreting	All participants were recruited from a 3-year, pre-registration, full-time occupational	a student sample was chosen for whom the researcher had no direct relationship or teaching responsibilities.		Researching in a familiar setting can affect the level of trust between the participants and the investigator. To create some	Approval for the study was obtained from a university ethics committee.	Thematically The theoretical constructs of Bernstein (2000) and Maton (2010) were used heuristically to investigate the findings. The general approach to data exposition	Students verified aspects of interview data that at the point of transcription needed some clarification. This added rigour to the credibility and trustworthiness of	Discussion These findings support Downing et al (2011), who suggested that PBL offers students the opportunities to develop skills such as problem solving and clinical reasoning, and Reeves et	Y E S	9								

	<p>identity: occupational therapists as 'knowers'. Whitcombe 2013 B UK</p>	<p>influences students' view of professional identity.</p>		<p>identity from one problem-based learning programme.</p>	<p>students' perception of knowledge and identity, a qualitative design was deemed appropriate.</p>	<p>therapy programme.</p> <p>To create some distance between the researcher and the participants, a student sample was chosen for whom the researcher had no direct relationship or teaching responsibilities.</p> <p>They were selected because this permitted retrospective accounts of their experiences over the 3 years of the PBL programme.</p> <p>Of the 43 students who expressed an interest in the study, 20 randomly selected students were invited to participate.</p> <p>Not clear if they used purposive sample</p>	<p>The data were gathered by in-depth, semi-structured interviews with third year occupational therapy students. They were selected because this permitted retrospective accounts of their experiences over the 3 years of the PBL programme. The interview questions were largely explorative and focused on different aspects of the programme; for example, the students' experiences of group work and practice placement and how they viewed knowledge. Clarifying questions checked in-situ understanding of students' responses. Electronic and hard copies of the interview transcripts were stored securely.</p> <p>Each participant was interviewed on one occasion for a period of between one and one and half hours. All the interviews were recorded on a digital Dictaphone and transcribed verbatim.</p> <p>Data saturation was not mentioned</p>	<p>E L L</p>	<p>distance between the researcher and the participants, a student sample was chosen for whom the researcher had no direct relationship or teaching responsibilities.</p>	<p>They signed a consent form to verify that they volunteered for the study and that they understood the purpose of the research.</p>	<p>followed a process of abductive reasoning that starts with the particular (that is, the examination of the students' interviews), from which conceptual ideas are developed, refined and then broadened out to theory (Coffey and Atkinson 1996). The detailed analysis of each interview transcript led to data reduction and data complication. Descriptive 'tags' were attached to each transcript to summarise segments of data or sections of each interview transaction. Second level coding involved generating superordinate categories that linked data together to form new conceptual ideas. The concepts produced from each transcript were then displayed visually to compare between individuals. The final stage of analysis led to data verification (Miles and Huberman 1994), drawing conclusions from the findings and developing themes from the data that were then linked with theory. The researcher Not critically examined their own role, potential bias and influence during analysis and selection of data for presentation</p>	<p>E L L</p>	<p>the findings. Trustworthiness was also addressed using interview excerpts to support and illustrate the interpretations. A reflexive approach to the research process was adopted: memos were used to question and challenge pre-conceived ideas about the subject of investigation and the researcher's understanding of PBL.</p>	<p>al (2004) who found that PBL seems to equip students with the skill of how to access knowledge. The strength of PBL lies with the nurturing of students' professional skills, appealing to a sense of 'professionalism' (Hoyle and John 1995, p122), but in this study PBL inhibited the acquisition of a body of knowledge that is not directly relevant to practice context.</p>		
3	<p>The influence of an undergraduate problem/context-based learning program on evolving professional nursing graduate practice. Williams et al 2012 Canada</p>	<p>It has been proposed that Problem Based Learning (PBL) enhances knowledge acquisition, clinical competency and professionalism because of students assuming the role of registered nurse as they work through real practice situations daily in the classroom. However, currently there is limited research supporting the achievement of these outcomes from a graduate nurse perspective. The purpose of this study was to determine how PBL graduates describe the contribution of the educational experience to their professional practice as nurses.</p>	<p>Y E S</p>	<p>how PBL graduates describe the contribution of the educational experience to their professional practice as nurses.</p> <p>The lack of research related to the contribution of CBL to nursing graduate practice over time meant that a qualitative approach was most appropriate. A focused ethnography is a time-limited exploratory study that is topic specific and prioritizes one mode of data collection. In this case, a select area of beliefs and norms about how CBL influenced nursing practice was studied for its meaning among a specific group of people, nurses who graduated from a CBL program. Semi-structured interviews with focus groups or individuals were the primary strategy for data collection.</p> <p>Y E S</p>	<p>Method Design A focused ethnography is a time-limited exploratory study that is topic specific and prioritizes one mode of data collection. In this case, a select area of beliefs and norms about how CBL influenced nursing practice was studied for its meaning among a specific group of people, nurses who graduated from a CBL program. Semi-structured interviews with focus groups or individuals were the primary strategy for data collection.</p> <p>Y E S</p>	<p>Purposive and theoretical sampling was utilized to seek out a cross sectional sample of participants who could provide the most relevant data with a maximal variation within graduation year subgroups.</p> <p>the initial recruitment numbers for these years were small so recruitment was opened to all individuals who had graduated from the program since inception. Recruitment was accomplished by: sending out letters to all alumni, advertising in the provincial nursing association magazine, writing a descriptive article for the same magazine, posting advertisements in all local hospitals and community health centers in the northern part of the province where most graduates were employed, and snowball sampling. Most participants were recruited through almost equal response to letters sent out and the</p> <p>Y E S</p>	<p>Each focus group included individuals who graduated from different years. This variation within the focus group participants stimulated discussion and recall of nurses at different points in their professional careers. The focus groups were comprised of anywhere from two to seven members, with the majority having two or three members. To include participants who were not able to attend focus groups, individual interviews through either telephone or e-mail were used. Half of the interested individuals requested an individual interview mainly due to difficulties in scheduling that naturally occurs with individuals who work a variety of shifts. Individual interviews were scheduled at a time and place that were mutually agreeable. The interview guide evolved as analysis indicated a story of emerging themes and issues of interest. As the guide evolved, the protocol was altered to initially discuss and verify the emerging story with participants, to identify differences, and then to probe more deeply into specific areas of interest. Thus verification occurred iteratively throughout the data collection and analysis process. The protocol was altered to accommodate one overseas participant who participated via e-mail. Approval for the study was granted by the Health Research Ethics Review Committee for the University. The final sample</p> <p>Y E S</p>	<p>The sample in this study was self-selected which may inhibit transferability to other settings. However, this is the first research on the long-term contributions of CBL approaches to nursing education.</p> <p>In this case, a select area of beliefs and norms about how CBL influenced nursing practice was studied for its meaning among a specific group of people, nurses who graduated from a CBL program.</p> <p>C A N N O T T E L L</p> <p>Y E S</p> <p>The relationship between researcher and participants have not been adequately considered. The researcher not critically examined their own role, potential bias and influence during data collection.</p>	<p>Approval for the study was granted by the Health Research Ethics Review Committee for the University.</p> <p>The researcher has not discussed issues raised by the study, e.g. issues around informed consent or confidentiality.</p> <p>C A N N O T T E L L</p>	<p>Data was analyzed thematically and inductively. A combination of open coding, then constant comparison of codes and collapsing of similar codes was used to reduce the data to a manageable size and to identify major categories and themes. As each interview was analyzed, emerging categories informed questions for the next interview. Participant recruitment continued until a full description occurred as evidenced by redundancy. Initially, all team members coded the interviews by hand, and team meetings were held so that similarities and differences in interpretations and coding could be discussed. Despite some minor variations among team members, it was clear that there was consensus on the main themes and categories. Team discussion was used to tease out subtle differences in meaning that were specific to a participant's individual expertise and experience. For example, after some discussion, the main category of 'Making sense of CBL' was divided into two processes: 'Understanding how to use CBL' and 'Valuing CBL'. This differentiation allowed us to understand differences between groups of participant experience. For example, some students could use the CBL processes (i.e. brainstorming, teamwork, and scenario application) but did not perceive them to be valuable and integral to their learning. Other students</p> <p>C A N N O T T E L L</p>	<p>Y E S</p> <p>The researcher has not discussed the credibility (rigour) of findings</p>	<p>This study is a response to Biley and Smith (1998) challenge to validate the findings of their study using a different setting and higher numbers of PBL graduates. While helping to bridge a gap in the current literature about PBL/CBL this study has confirmed that from the graduates' perspective their transition into graduate practice is likely not that different from that of graduates from traditional programs. However, once graduates are through the transition period they can acknowledge how the CBL program provided them with the opportunity to develop many of the skills and abilities considered necessary for effective professional nursing practice. Since the graduates represent a program that is delivered not only at the university but also at partner colleges through the northern part of the province, it is also clear that the desired outcomes of a CBL program can be accomplished in a variety of settings.</p> <p>C A N N O T T E L L</p>	<p>Y E S</p>	8.5		

						article published in the professional magazine.		was 45 participants. Eight focus group interviews involving 22 individuals and 23 individuals on phone interviews were completed. At that point it was clear that analytical redundancy and saturation had been reached as no new themes were emerging from the data.				quickly learned to use the processes and could also see why and how this approach to learning had advantages over more traditional approaches.										
4	Problem-based learning and clinical practice: The nurse practitioners' perspective Chikotas 2009 USA	Explored the lived experience of the nurse practitioner (NP) who had been educated through a problem-based learning (PBL) approach and the meaning of that education on the NPs current clinical practice . The purpose of this study was to explore the lived experiences of practicing NPs' educated by a PBL instructional approach and to investigate the meaning PBL brought to their current clinical practice.	Y E S	The research questions called for a qualitative, phenomenological exploration of the lived experiences and the depiction of personal meaning. Phenomenology is often utilized when a topic has not been researched as is the case with the practicing NP who has been educated through the instructional strategy of PBL.	Y E S	This study was most closely informed by the works of Heidegger and therefore utilized an interpretive approach. It was the author's intent, as it is in interpretive phenomenology, to go further than the description of the event, and instead seek to identify the meanings that may have been otherwise concealed by focusing on the description of the phenomenon alone. Data was gathered by conducting in-depth, individual interviews, both face to face and via telephone.	Y E S	The snowball effect was utilized to identify programs. Programs needed to meet the following criteria: programs had to be accredited through the Commission on Collegiate Nursing Education; the program curricula had to utilize the PBL approach for 50% or more of the curriculum, based on credit hours and the programs needed to be in existence prior to 1999 so representation of how PBL continues or does not continue to make meaning in practice could occur. Only two universities within the United States were found to meet the criteria. This study utilized a purposeful, criterion-referenced sampling methodology. Graduates from 1999 and prior were determined and letters were sent directly from the programs to the potential participants. A total of 202 invitational letters were sent to potential participants. From those 202 invitational letters 22 responded and 13 respondents met the criteria to participate in the study. Nine of the potential participants were no longer in practice therefore not meeting the criteria.	Y E S	Data was gathered by conducting in-depth, individual interviews, both face to face and via telephone. Prior to the initial interviews a pilot study was conducted to assist in determining how future respondents may interpret the questions and how well the questions elicited the information requested. From the pilot study interview questions were then restructured. An interview guide was utilized, using open-ended, semi-structured questions to focus on key areas, yet allowing for flexibility. Interviews were conducted until theoretical saturation was reached with a sample size of 13. With permission of the participants, interviews were taped and transcribed.	Y E S	The snowball effect was utilized to identify programs. A total of 202 invitational letters were sent to potential participants. From those 202 invitational letters 22 responded and 13 respondents met the criteria to participate in the study. Nine of the potential participants were no longer in practice therefore not meeting the criteria. The relationship between researcher and participants have not been adequately considered. The researcher not critically examined their own role, potential bias and influence during formulation of the research questions and data collection.	C A N N O T T E L	Ethical considerations Within the United States ethical approval is required when working with human subjects at any level. This is carried out through "Institutional Review Boards" within institutions. Ethical approval was sought from each participating institution involved in the study prior to contacting potential participants. Participation was voluntary and participants were made fully aware of the nature of the project and informed consent was obtained prior to the initial interview. Participants were informed of their rights to withdraw at any point from the research and were informed that data were confidential and that individual responses would not be possible to trace in presentation of the findings.	Y E S	Data analysis Data from interviews were analyzed using the constant comparative method of data analysis to determine key themes and pat- terns. Themes and patterns were then coded and compared to integrate as many categories as possible. Categories were added, deleted, and refined as additional information became available through the clarification process and follow-up interviews. The researcher not critically examined their own role, potential bias and influence during analysis and selection of data for presentation	C A N N O T T E L	It was found that information obtained in the PBL classroom could be directly applied to professional practice providing the NP with the skills needed for clinical decision making with a holistic viewpoint in clinical practice. The analysis both supports and challenges the current research experiences, satisfaction, and outcomes related. Scientific rigour Rigour of the data was aimed for by performing member checks twice. Transcripts and biographical information were reviewed by respective participants for accuracy. The researcher shared her impressions of findings from the data analysis to make sure participants were comfortable with the presentation of the data, to determine if participant's experiences were recognizable in the interpretation, and to allow participants to feel secure that their identity remained confidential. Findings The participant's individual PBL experience and current clinical practice were varied in terms of how they described	Y E S	The respondents of this study found PBL motivated learning, encouraged teamwork, enabled them to view the process of CDM as holistic. These implications are an important aspect to the education of the NP. By having these skills and traits, the NP student can move into the ever-changing practice of health care with bolstered confidence in their resourcefulness and knowledge base. This research provides perspectives on the knowledge development that occurs in taking part in a PBL activity and its long-term impact on the practice of the professional. Generalization of this study is limited because the sample consisted of only female graduates from two nurse practitioner programs within the United States. Further verification should be undertaken to support the belief that PBL is an effective instructional approach in the education of the NP. It is also recommended that groups of NP graduates from the PBL approach be compared to those of the lecture-based approach to determine if there is a difference in the satisfaction, perception, experiences and outcomes for those graduates now in practice. An evaluation of clients, co-workers, and employer's satisfaction level of graduate NPs from the PBL approach to those of NPs from the traditional lecture method would be mandatory. A study comparing actual patient outcomes of graduate NPs from the PBL approach and graduate NPs from the lecture-based approach would be a worthy investigation to determine if patient outcomes are in any way affected by the practitioners' educational background. This research has assisted in bridging the gap in the existing literature concerning PBL and NPs, in practice.	Y E S	9
5	Problem Based Learning in physiotherapy education: A practice perspective. Gunn et al 2012 UK	This study aimed to provide evidence of how skills gained through PBL are applied in practice by student physiotherapists, from the perspective of their placement supervisors.	Y E S	The study was designed in two parts, the first consisting of qualitative analysis of placement feedback documentation provided by practice educators at the completion of each practice placement. Part	Y E S	A qualitative methodology utilising a one-to-one semi-structured interview approach was employed, using an interview schedule developed from the findings of part one of the study. The interview	Y E S	Participants and procedure A sample of physiotherapists with experience of super- vising our students were recruited from NHS trusts within the South West peninsula of the UK. A purposive sample of 10	C A N N O T T E L	A qualitative methodology utilising a one-to-one semi-structured interview approach was employed, using an interview schedule developed from the findings of part one of the study. The interview schedule contained prompts relating to the participant's work environment, supervision practice and experience, as well as exploratory prompts relating	C A N N O T T E L	Participants and procedure A sample of physiotherapists with experience of super- vising our students was recruited from NHS trusts within the Southwest peninsula of the UK. A purposive sample of 10	C A N N O T T E L	Ethical consent Consent for the study was granted by Plymouth and Cornwall Research Ethics Committee, and the Research and Development departments of each participating Trust. Informed consent was gained prior to the	Y E S	Analysis All interviews were fully transcribed and analysed using thematic analysis techniques [9]. Two researchers (HG, HH) undertook initial analysis and coding of four randomly selected transcripts and discussed their interpretations to reach consensus on initial themes. Coding of the other transcripts was	C A N N O T T E L	Findings and discussion Three main themes relating to the study aims were developed from the interviews (Table 2). These were: • Perceptions of PBL. • Attributes of the students in practice (responsiveness,	C A N N O T T E L	The practice educators generally demonstrated a good awareness of the PBL approach and felt that it offered positive benefits for both student education and eventual clinical practice. In this study, there appears to be some evidence of the clinical application of skills and attributes which are purported to be developed using a PBL approach. Practice educators particularly identified that students tended to demonstrate positive	Y E S	7.5

				two consisted of semi-structured interviews carried out with individual supervisors to gain a more in-depth insight and to enable further exploration of the initial themes. This paper reports on the key findings of part two of the study.		schedule contained prompts relating to the participant's work environment, supervision practice and experience, as well as exploratory prompts relating to their perception and understanding of PBL and the performance of the students they had supervised.		participants was developed from the initial pool of respondents, aiming to include a spread of participants from across geographical and practice specialty areas. The characteristics of the participants and their supervisory experience are detailed in Table 1. Interviews were undertaken by lecturers (HG HH) who were involved in the design and teaching of the programme. Each interview was recorded and lasted approximately 45 minutes.		to their perception and understanding of PBL and the performance of the students they had supervised. Interviews were undertaken by lecturers (HG HH) who were involved in the design and teaching of the programme. Each interview was recorded and lasted approximately 45 minutes. Data saturation was not discussed or mention		participants was developed from the initial pool of respondents, aiming to include a spread of participants from across geographical and practice specialty areas. The characteristics of the participants and their supervisory experience are detailed in Table 1. Interviews were undertaken by lecturers (HG HH) who were involved in the design and teaching of the programme. Each interview was recorded and lasted approximately 45 minutes. The relationship between researcher and participants have not been adequately considered. The researcher not critically examined their own role, potential bias and influence during formulation of the research questions and data collection. There was unclear to how the researcher responded to events during the study Can't tell and if they considered the implications of any changes in their research design.		commencement of the interview and all contributions were anonymised.		subsequently undertaken by one member of the team (HG); this was then reviewed (by HH and BH) for reliability and further discussion and development of the themes. The researcher not critically examined their own role, potential bias and influence during analysis and selection of data for presentation		approach, self-management, actions and performance). • Factors affecting success. The researcher has not discussed the credibility (rigour) of findings; however, two researchers (HG, HH) undertook initial analysis and coding of four randomly selected transcripts and discussed their interpretations to reach consensus on initial themes. Coding of the other transcripts was subsequently undertaken by one member of the team (HG); this was then reviewed (by HH and BH) for reliability and further discussion and development of the themes.		learning behaviors and a high level of self-direction during their placements. There was also evidence of the application of other transferable skills inherent in the PBL approach to the practice setting, including good interpersonal skills, which were particularly evident within the multidisciplinary team environment and a holistic, problem-solving approach to their clinical practice. In line with the findings of other research, the levels of factual knowledge demonstrated by the students were not considered to be superior to those who have learnt using other approaches. Throughout this study there has been a recurring question of whether the attributes displayed by students are the result of inherent individual characteristics, or the use of a PBL approach in their learning. The degree of resonance between the positive attributes that participants felt were displayed by the students and those that are highlighted within the literature may suggest at least some influence of the PBL approach. However, the variation that was highlighted within students coming from the same approach would suggest that individual characteristics are significant, and would raise the question as to whether this approach is suited to all learners or merely for those who may display an inherent preference toward collaborative self-directed		
6	Students' perspectives of core value development in a modified problem-based learning program Wormley et al 2019 USA	Y E S	Phenomenological methods via semi-structured focus group interviews were used to foster an in-depth understanding of students' experiences.	Y E S	This qualitative study aimed to understand, interpret, and describe doctoral physical therapy students' perspectives of core value development in a modified PBL program. Twenty-seven of 49 students from a single class participated in the study at the time of graduation. Phenomenological methods via semi-structured focus group interviews were used to foster an in-depth understanding of students' experiences.	Y E S	The DPT program at SHU is a "modified" PBL curriculum in the Northeast region of the United States. A purposive sample of students was identified from SHU during their final clinical affiliation. Criteria for inclusion, at the time of this study, meant that participants had completed all academic requirements of the program and would obtain their doctoral degree in May 2011. Participants were recruited via an email sent to the entire graduating class comprised of 49 students (67% female and 33% male). Twenty-seven of 49	C A N N O T T E L	Focus group interviews took place in a classroom, previously used for tutorial, to draw on familiar experiences of the students. A copy of the core values document was available for reference during focus group interviews. Interviews were digitally recorded to ensure accuracy for subsequent data sorting and classification. The researcher's written field notes included observations, thoughts, and recording of key words and/or phrases that students repeated. Interviews were completed in 46-60 minutes. Sampling was completed when the researcher noted that data collection had reached a point of saturation, such that no new information was obtained (Bowen, 2008). Thick description of participant experiences, member checking in the focus groups (to verify themes and to inquire if there were any concepts that needed to be added), and peer debriefing confirmed data saturation	C A N N O T T E L	In qualitative research, trustworthiness of findings is established by demonstrating that credibility (truth value), transferability (applicability), dependability (consistency), and confirmability (neutrality) of findings have been achieved (Lincoln and Guba, 1985). Lincoln and Guba (1985) offer strategies that can be used by qualitative researchers to achieve each of these criteria, and the following were applied in this study: peer debriefing; raw data to support findings; member checking; prolonged engagement; field	C A N N O T T E L	IRB review and approval was obtained, and all participants provided informed consent prior to data collection. There were not sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained. The researcher has not discussed some issues raised by the study e.g. confidentiality, however, they mentioned in the interview guide appendixes that ((You have all consented for the interview to be recorded and this information will remain confidential)).	C A N N O T T E L	Data analysis began with verbatim transcription of all interviews, completed by the primary investigator. Data analysis was initiated during transcription with recording of reflective notes as common ideas and themes emerged. The next step in the analysis was an initial read through of all interview transcripts while underlining key phrases and recording of additional notes. The constant comparison method was employed to analyze interview data. Words or phrases describing certain aspects of the experience, from each of the interviews, were selected and categorized into groups, using the core values as a framework. This process evolved until a total of nine themes emerged from the data. The themes were then related to the core values and their indicators, providing a framework to interpret the findings. Figure 1 illustrates the process the researcher used to link participant	Y E S	During the data analysis process, the primary investigator classified statements into nine emerging themes: (1) A New Way of Learning; (2) The Big Picture; (3) Accountability; (4) Self-Reflection; (5) The Active Learner; (6) Confidence; (7) Where's the evidence? (8) Teamwork; and (9) Faculty/Program Expectations. An additional overarching theme of transformation was also identified from the focus group interviews. The following sections include a description of each theme and direct student quotations to support the curricular elements of the PBL curriculum that influenced their development of the core values. In qualitative research, trustworthiness of findings is established by demonstrating that	Y E S	Our students' description of what embodies a successful clinician includes "being a professional." They acknowledged their transformation from student to professional was supported by the curricular elements of the modified PBL process at SHU. These findings improve our understanding of how educators can support the development of professional core values and graduate successful clinicians who continue to uphold professionalism standards in physical therapy practice and can benefit both PBL and traditional curricula. Future research would be beneficial to investigate faculty perspectives regarding development of core values from the same PBL curriculum, investigate student and faculty perspectives regarding development of core values from a traditional curriculum, development of a consistent tool for evaluation and re-evaluation of core values across curricula, and to interview students following first year of clinical practice to identify experiences that encourage continued development of core values.	Y E S	8	

					students (55% of the class) volunteered to participate. Three females, from the class of interest, participated in a pilot interview two months prior to graduation, and the remaining 24 (18 female and 6 male) students were assigned to three focus groups of eight students by randomly drawing names. Focus groups were held immediately following graduation (2 and 3 three days post) in order to not allow work experience as entry-level therapists to skew memory of the students' educational process .		was achieved across the three focus groups.		notes and reflections from the researcher; thick description; description of research design and data collection; reflective appraisal of the study; an inquiry audit; and use of an audit trail. Consistent with qualitative methodology, the researcher continually reflected on her faculty role in a PBL curriculum and her previous experiences and biases to be transparent and minimize their impact on the research process and findings. Researcher reflection regarding positionality and biases was used to be forthcoming regarding her relationship to the study. The researcher as a faculty member created the potential for researcher bias during focus group interviews and in data analysis.	Readers may be concerned that focus group interviews might not have provided as rich of a data set than individual interviews might have, suggesting that data collection via focus group interviews may cause some students to be reluctant to share true feelings in a group setting.	quotes to the core values, theme, and curricular element. The underlined statements in the direct quotations supported thematic development and linkage of core values from the perspective of the participants. This was done for each of the themes relating to the core values and the process ultimately led to the development of a single overarching theme.	credibility (truth value), transferability (applicability), dependability (consistency), and confirmability (neutrality) of findings have been achieved. the following were applied in this study: peer debriefing; raw data to support findings; member checking; prolonged engagement; field notes and reflections from the researcher; thick description; description of research design and data collection; reflective appraisal of the study; an inquiry audit; and use of an audit trail. Consistent with qualitative methodology, the researcher continually reflected on her faculty role in a PBL curriculum and her previous experiences and biases in an effort to be transparent and minimize their impact on the research process and findings. Researcher reflection regarding positionality and biases was used to be forthcoming regarding her relationship to the study.																
7	Does Enquiry Based Learning (EBL) impact on clinical practice? A qualitative exploration of midwifery graduates' perceptions. Nallen et al 2018 Ireland	The overall aim of the research was to elicit midwifery students' perceptions of EBL. This entailed three objectives: to elicit the effect of EBL on the experience of learning; its perceived effect on the quality of learning; and its effect on clinical practice. This paper reports on the latter objective.	Y E S	The overall aim of the research was to elicit midwifery students' perceptions of EBL. This entailed three objectives: to elicit the effect of EBL on the experience of learning; its perceived effect on the quality of learning; and its effect on clinical practice. This paper reports on the latter objective. A qualitative theory-driven approach was used as the philosophical framework to underpin the study. A qualitative approach utilising semi-structured interviews and content analysis.	Y E S	A qualitative theory-driven approach was used as the philosophical framework to underpin the study. Two cohorts who had successfully completed a Higher Diploma in Midwifery programme in March 2012 and September 2013 (n = 28) were invited to participate. Purposive sampling was utilised to recruit fourteen graduates who had at least six months post midwifery registration clinical experience. All participants had one third of theoretical modules facilitated through EBL	Y E S	Two cohorts who had successfully completed a Higher Diploma in Midwifery programme in March 2012 and September 2013 (n = 28) were invited to participate. Semi-structured individual interviews were used to elicit participant's perceptions of the impact of EBL on clinical practice and related transferable skills. In keeping with the theory driven approach, the inter-view schedule was based mainly on EBL theory with questions derived from the literature. The use of open questions with additional probes promoted in-depth responses.	C A N N O T E L	Two cohorts who had successfully completed a Higher Diploma in Midwifery programme in March 2012 and September 2013 (n = 28) were invited to participate. The interviews lasted on average 45 minutes and were audio- recorded and transcribed verbatim. Full transcripts were returned to	Y E S	Within the study setting, students worked in small groups of 5 with the midwifery lecturer assuming the role of facilitator. The researcher was one of five EBL facilitators the students were exposed to over the du-ration of the programme .	Y E S	The relationship between researcher and participants have not been adequately considered. The researcher not critically examined their own role, potential bias and influence during formulation of the research questions or data collection. There was unclear to how the researcher responded to	C A N N O T E L	Ethical approval was granted from "X" and noted by the Research Ethics Committee at "X". Written informed consent was obtained prior to the interviews. There were not sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained. The researcher has not discussed some issues raised by the study e.g. confidentiality or how they have handled the effects of the study on the participants during and after the study	C A N N O T E L	The transcripts were analysed using a content analysis framework described by Hsieh and Shannon (2005). The emergent themes and categories were re-viewed independently by the researchers' supervisors.	C A N N O T E L	The researcher was not explained how the data presented were selected from the original sample to demonstrate the analysis process, not explained the sufficient data are presented to support the findings, not explained if any contradictory data are considered, and if they had critically examined their own role, or any potential bias had influenced during analysis and selection of data for presentation.	C A N N O T E L	Findings centered on the theme 'Effect of EBL on clinical practice', with positive perceptions of EBL reported in relation to its connexion to midwifery practice. the findings in relation to the theme 'Effect of EBL on clinical practice' highlighted three categories:	C A N N O T E L	Linking theory to clinical practice, N Linking clinical practice to theory and O Transferable skills. In order that EBL T continues to promote the link between theory and L practice, it is important that facilitators construct triggers which replicate real life and promote the use of realistic forms of expression such as role play which was so positively evaluated in this study.	C A N N O T E L	Findings in relation to how participants' utilised EBL principles for knowledge transfer in clinical practice are novel in relation to extant EBL literature there- fore empirical research is recommended to formally determine what EBL principles, if any, are used in various clinical settings and to evaluate their effectiveness. Students should continue to be encouraged to exchange information and ideas regarding EBL with clinical personnel. Chunta and Katrancha (2010) identify that EBL can be used as a teach- ing and learning strategy in almost any setting, including staff develop- ment, therefore there is potential for this positive engagement between students and clinical staff to be further explored and capitalised on. Participants considered that EBL enhances the development of transferable skills. Further evidence-based evaluation is warranted using, for example, recognised critical thinking scales. Any educational strategy, such as EBL, which is perceived to enhance problem solving and decision-making skills merits	Y E S	7.5

				throughout the programme.	not to take part in this study.	participants, thus improving credibility of the study.	events during the study and if they considered the implications of any changes in their research design.				verbatim. Full transcripts were returned to participants, thus improving credibility of the study. The transcripts were analysed using a content analysis framework described by Hsieh and Shannon (2005). The emergent themes and categories were reviewed independently by the researchers' supervisors .	consideration in professional educational programmes.											
				Semi-structured individual interviews were used to elicit participant's perceptions of the impact of EBL on clinical practice and related transferable skills. In keeping with the theory driven approach, the inter- view schedule was based mainly on EBL theory with questions derived from the literature. The use of open questions with additional probes promoted in-depth responses.		Saturation was deemed to be reached after the fourteenth interview as no new themes were emerging.					There was not adequate discussion of the evidence both for and against the researchers' arguments.												
8	Standing on the precipice: Evaluating final-year physiotherapy students' perspectives of their curriculum as preparation for primary health care practice McMahon et al 2016 Ireland	To explore final-year physiotherapy students' perceptions of primary health care practice to determine (1) aspects of their curriculum that support their learning, (2) deficiencies in their curriculum, and (3) areas that they believe should be changed to adequately equip them to make the transition from student to primary health care professional.	Y E S	Framework analysis methodology was used to analyze group opinion obtained using structured group feedback sessions.	Y E S	Framework analysis methodology was used to analyze group opinion obtained using structured group feedback sessions. Not justified the research design	Y E S	We invited by email all final-year students registered in undergraduate physiotherapy programmes (n 14 134) in the higher education institutions in Ireland to attend SGFS. There were not any discussions around recruitment or if any people chose not to take part in this study.	C A N N O T T E L	Y E S	Of the final-year students contacted, 51% (68/134) participated in the study, 10 of whom were male and 12 of whom had previously completed primary health care experience. Four SGFS were held, one in each institution, and each session included only students from that institution. Students who had previously completed primary health care experience were included in each group. Each session was moderated by a facilitator, and an assistant facilitator observed the participants' behaviors and took notes on the discussion. Each SGFS was scheduled to take 90 minutes, and the protocol set out next was used for all four sessions.	Y E S	The relationship between researcher and participants have not been adequately considered. The researcher not critically examined their own role, potential bias and influence during formulation of the research questions or data collection. There was unclear to how the researcher responded to events during the study and if they considered the implications of any changes in their research design.	Y E S	Ethical approval for this study was granted by the relevant universities' human research ethics committees. There were not sufficient details of how the research was explained to participants for the reader to assess whether ethical standards were maintained. The researcher has not discussed some issues raised by the study e.g. confidentiality or how they have handled the effects of the study on the participants during and after the study.	Y E S	All information from each group was recorded in writing, and data were reduced and analyzed using framework analysis, a systematic process informed by Ritchie and Spencer. Framework analysis was chosen because it can provide outcomes and recommendations in a short time frame. The analysis was undertaken in a coherent, systematic, and visible way, which, although mainly inductive, allowed for the inclusion of a priori as well as emergent concepts. In the initial familiarization stage, the authors developed a feel for the meaning of the data, identifying emerging themes and using key codes to develop a thematic framework. Second-level coding was then used to identify more specific themes that emerged, and charts were developed using the headings from the thematic framework. To ensure coder reliability, the primary researcher and two experienced qualitative researchers checked inter-coder and intra-coder reliability on a random selection of transcripts. The resulting 93% inter-coder reliability and 95% intra-coder reliability suggested excellent agreement. ³⁴ Kappa coefficients for inter- and intra-coder reliability ranged from .75 to .91, suggesting good to excellent agreement.	Y E S	Results are presented in the following three sections: (1) aspects of their curriculum that students perceived supported their transition to primary health care practice; (2) aspects of their curriculum that students perceived to be deficient and that, if addressed, would better prepare them for primary health care practice; and (3) aspects of their curriculum that students perceived required change. Figure 2 provides an overview of these themes. Each theme is presented, augmented by student quotations. (The numbers in parentheses after the quotations represent university and student number.)	Y E S	This study provides important insights into physiotherapy students' perceptions of primary health care. It also provides important indicators of the curriculum changes needed to increase graduates' confidence in their ability to take up employment in primary health care. This study identifies the need for enhanced integration of primary health care into undergraduate curricula in an explicit, organized, and systematic manner. This integration needs to include practice placement opportunities, development of communication skills, and health promotion education. We believe that adopting these recommendations will better equip students to make the transition to primary health care employment.	Y E S	8

Appendix 6: Proposed letter to access the participants.



Proposed letter of access

Dear [Head of Occupational Therapy Department]

My name is Faris and I am an PhD student enrolled in the Occupational Therapy Department at Cardiff University, School of Health Sciences, UK. I am conducting a research project as part of my PhD studies for a study titled "Saudi Arabian Occupational Therapy Students' Experiences of Problem Based Learning and Their Transition to Practice". I would like to undertake this study at your university through collect data from internship students by conducting semi-structured interviews between January 2021 and March 2021. The study aims to investigate OT internship students' experiences regarding the influences of PBL when they move to practice in Saudi Arabia. It will attempt to investigate how PBL course influences internship OT students' practice, to explore OT internship students' perspectives of enablers and barriers during transition period, and to explore OT internship students' perspectives of the influences of PBL during transition period. There is no any connection with patients, as the data will be collected through the internship students. The needed data will not contain any personal information that can reveal students' or staffs' identity. All information collected from the internship students will be confidential and analysed only for research purposes. The study key findings will be reported back to you to inform and guide internship programme development in the future.

I wrote this letter for you to give a brief description on the research, and I would be grateful if you could write an initial written consent for me to begin my procedures at the University, as it is an ethical requirement of the research process. If you require further information, please contact me.

Yours sincerely

Faris Abaalkhayl
PhD Occupational Therapy Student
School of Healthcare Sciences
Cardiff University
Email: AbaalkhaylFM@cardiff.ac.uk

Appendix 7: Invitation to participate in the study letter.



Invitation to participate in a study

Title of the study: Saudi Arabian Occupational Therapy Students' Experiences of Problem Based Learning and Their Transition to Practice.

I am inviting you to take part in a research study regarding your experiences in Problem-Based Learning and the transition from being student to practitioner in the internship program. The aim of the study is to investigate occupational therapy internship students' experiences regarding the influences of PBL when they move to practice in Saudi Arabia in terms of how the Problem-Based Learning course influences internship occupational therapy students' practice, perspectives of enablers and barriers during transition period, and the influences of PBL during transition period.

I am inviting six internship students whose studies were based on Problem-Based Learning, have completed their studies in Saudi Arabia and have had at least three month's experience in any occupational therapy department. I hope that the results will help to identify how the Problem-Based Learning course influences internship occupational therapy students' practice, to identify occupational therapy internship students' perspectives of enablers and barriers during the transition period and to identify occupational therapy internship students' perspectives of the influences of Problem-Based Learning during the transition period. The aim will be to provide more tailored assistance for occupational therapy students in their curriculum in Saudi Arabia, as well as improving the quality of healthcare professional internship by guiding universities and supervisors to provide more appropriate help for occupational therapy students in their transition to practice in Saudi Arabia. If you take part in this study, I will contact you to arrange a convenient time and place for the interview, which will last for approximately one hour.

I have included detailed information in the attached information sheet. Please feel free to contact me with any questions you may have or to discuss the implications of your participation in more detail. If you are interested in participating in the study, please complete the attached consent form and return it using the Email provided.

Sincerely Yours,

Faris Abaalkhayl
PhD Occupational Therapy Student
School of Healthcare Sciences
Cardiff University
Email: AbaalkhaylFM@cardiff.ac.uk

Appendix 8: Participant's information sheet.



Participant's Information Sheet

Dear

You have been invited to take part in a research study, but before agreeing to take part please read the information below carefully.

Title of study

Saudi Arabian Occupational Therapy Students' Experiences of Problem Based Learning and Their Transition to Practice.

What is the purpose of the study?

The purpose of the study is to investigate occupational therapy students' internship experiences regarding the influences of Problem-Based Learning when they move to practice in Saudi Arabia. I am interested in learning how the Problem-Based Learning course influences internship occupational therapy students' practice, to identify occupational therapy internship students' perspectives of enablers and barriers during transition period and to identify OT internship students' perspectives of the influences of Problem-Based Learning during the transition period.

Why have I been invited to participate?

You have been selected because you are an occupational therapy internship student who studies were based on Problem-Based Learning in any university in Saudi Arabia and have had at least three month's experience in any occupational therapy department.

Do I have to take part?

Taking part in the study is entirely voluntary. If you do decide to take part you will be given this information sheet to keep and after you have had enough time to read through it, be asked to sign a consent form. If you decide to take part in the [study](#) you will have the right to leave the study at any time without the need to provide a reason; you will just need to inform the researcher of your intention to withdraw.

What will happen to me if I take part?

The researcher will contact you to arrange on a convenient time and place for you. On arrival, a copy of the information sheet and consent form will be provided. I will explain the full study to you and ask for your consent, bearing in mind that you are free to withdraw at any time. If you are still interested in participating, you will then be asked to sign the consent form. This interview will last for approximately one hour.

Will I be paid for taking part?

No. You should understand that any data you give will be as a gift and you will not benefit financially in the future.

What are the benefits and what are the risks?

This study aims to provide information which will help to understand how the Problem-Based Learning course influences internship occupational therapy students' practice, perspectives of enablers and barriers during transition period, and the influences of PBL during the transition period. It will also offer more tailored assistance for occupational therapy students in their curriculum in Saudi Arabia; further, it will improve the quality of healthcare professional internships by guiding universities and supervisors to provide more appropriate help for occupational therapy students in their transition to practice in Saudi Arabia. There are minimal risks associated with participating in the study, however, you may experience some negative feelings or discomfort should you have any unpleasant experiences to share.

Will my part in the study remain confidential?

Yes, all information collected from you during the research project will be kept confidential. Your identity will be protected through the use of pseudonyms. Your consent form will be scanned into a secure electronic system before being destroyed. Audiotaping of interviews, notes and any personal information relating to you will be kept confidential between you, the researcher and the Research Supervisor. Any personal information you provide will be managed in accordance with data protection legislation. Please see 'What will happen to my Personal Data?' (below) for further information.

What will happen to my Personal Data?

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>

After collected the data, the researcher will anonymise all the personal data that has collected from you in connection with this research project, with the exception of your consent form. Your consent form will be retained for no less than 5 years from the end of project or at least 2 years post publication and may be accessed by members of the research team and, where necessary, by members of the University's governance and audit teams or by regulatory authorities. Anonymised information will be kept for a minimum of 5 year but may be published in support of the research project and/or retained indefinitely, where it is likely to have continuing value for research purposes. During the research project, the information will be saved securely on a password-protected computer and all paper will be kept in a locked cabinet.

What happens to the data at the end of the research project?

The data will be used for the purpose of this PhD thesis project. The data of the study may also be used for publication in an internal report, a scientific journal or presented at conferences. Any personal data will be removed before any form of using the data.

What will happen to the results?

The results of the study will be submitted as a PhD thesis to meet a requirement of a PhD degree in Occupational Therapy for Faris Abaalkhayl. The results of the study may also be published in an internal report or a scientific journal. They may also be presented at conferences. You will not be identified in any report, publication or presentation as pseudonyms will be used to protect your identity at all times. At the end of the study, a copy of the results will be available and sent to your email address should you request it.

What if there is a problem?

If at any time you feel unwilling to share unpleasant experiences, you are free to discontinue. The researcher will give you time to recover or may leave the meeting room and rearrange another meeting at a time which is convenient for you. The researcher may also signpost you to another person to have your problem resolved.

If you experience any other problems related to any aspects of the study itself that cannot be resolved by the researcher, you can make a formal complaint via the Cardiff University complaints procedure. Please send a copy of your letter of complaint to the Research Supervisor's address:

Dr Steve Whitcombe
School of Healthcare Sciences
College of Biomedical and Life Sciences
Cardiff University
Room 3.22, 3rd floor, Tŷ Dewi Sant
Heath Park, Cardiff, CF14 4XN
Tel: +44(0)29 20687794
Email: WhitcombeS@cardiff.ac.uk

Dr Teena Clouston
Reader: Occupational Therapy
School of Healthcare Sciences
College of Biomedical and Life Sciences
Cardiff University
Room 3.22, 3rd Floor, Tŷ Dewi Sant
Heath Park, Cardiff, CF14 4XN
Tel: +44(0)29 206 87759
Email: CloustonTJ@cardiff.ac.uk

If your complaint is not managed to your satisfaction, please contact hcaredeanery@cardiff.ac.uk
+44 (0)29 2068 7689

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.

Who is organising and funding this research project?

The research is organised by Faris Abaalkhayl, an PhD Occupational Therapy student at School of Healthcare Science in Cardiff University. The research is currently funded by Saudi Government.

Who has reviewed this research project?

The HCARE Post-Graduate Taught Research Ethics Committee at Cardiff University has approved the study. The study will be monitored and guided by Dr Steve Whitcombe and Dr Teena Clouston, PhD supervisors at Cardiff University.

What will I have to do?

With your agreement, the researcher will contact you to agree on a convenient time for you to meet. You will be asked to participate in an interview to discuss the experiences of occupational therapy internship students' regarding the influences of Problem-Based Learning in the internship programme in Saudi Arabia. The interview will be audio-taped so the researcher can concentrate on what you are saying without distracting you by writing notes. Following this, the researcher might contact you if more explanation is required or if anything is unclear.

Further information and contact details

Should you have any questions relating to this research project, you may contact us during normal working hours: via telephone: 0542220292 or email me at: AbaalkhaylFM@cardiff.ac.uk

Thank you for considering to take part in this research project. If you decide to participate, you will be given a copy of the Participant Information Sheet and a signed consent form to keep for your records.

Sincerely Yours,

Faris Abaalkhayl
PhD Occupational Therapy Student
School of Healthcare Sciences
Cardiff University
Email: AbaalkhaylFM@cardiff.ac.uk

Version 2.0: 17 Feb 2020

Appendix 9: Cardiff University consent form.



Consent Form

Title of study: Saudi Arabian Occupational Therapy Students' Experiences of Problem Based Learning and Their Transition to Practice.

Name of Researcher: Faris ~~Abaalkhavl~~

Please Initial Box



- I confirm I have read and understood the information sheet dated: Version 2.0: 17 Feb 2020 for the above study and have had the opportunity to consider the information, to ask questions and to have had these answered.
- I understand that my participation is voluntary and that I am free to withdraw at any time without giving any reason.
- I confirm that I have the opportunity to consider the information, to ask questions and to have had the questions answered.
- I agree to be interviewed at the time and place negotiated with the researcher.
- I agree for the interview to be audio-taped for research purposes.
- I give permission for the researcher to quote and use information I provided during the interview for the above study.
- I understand that all information about me will be kept in a confidential way and then destroyed once the study is completed.
- I agree to take part in this study and understand that I will receive a copy of this signed and dated consent form.

Name of participant.....
Signature Date

Name of Witness (Researcher)
Signature Date

*When completed, 1 for participant, 1 for researcher site file.
Version 1.0: 21 January 2020*

Appendix 10: KSA consent form.

	
Informed Consent for Cross Sectional Surveys إقرار موافقة للمشاركة بدراسة مقطعية	
Study Title = Saudi Arabian Occupational Therapy Students' Experiences of Problem Based Learning and Their Transition to Practice.	
Study No. : [REDACTED]	
Principal Investigator = [REDACTED]	
	
<p>You are requested to participate in research that will be supervised by [REDACTED] in SA.</p> <p>This study is about explore OT internship students' experiences regarding the influences of PBL when they move to practice in SA. It will attempt to discover how the PBL course influences internship OT students' practice, to identify OT internship students' perspectives of enablers and barriers during transition period and to identify OT internship students' perspectives of the influences of PBL during transition period.</p> <p>Your participation is voluntary and you have the right to not complete this survey without giving any reason and this will not affect your current or future medical care in MNG-HA.</p> <p>You do not have to sign this information sheet only you can choose to agree/disagree; your acceptance to complete the survey will be interpreted as your informed consent to participate.</p> <p>Your responses will be kept anonymous. However, whenever one works with email/the internet there is always the risk of compromising privacy, confidentiality, and/or anonymity. Despite this possibility, the risks to your physical, emotional, social, professional, or financial well-being are considered to be 'less than minimal'.</p> <p>If you have any questions about the research, please contact Dr. [REDACTED] College of Applied Medical Sciences Email: [REDACTED] Phone: + [REDACTED]</p> <p>In case you have any enquiries related to your rights as a research subject you can contact the Institutional Review Board on Te [REDACTED]</p>	<p>أنت مدعو للانضمام طوعاً لدراسة بحثية سوف يشرف عليها [REDACTED] المملكة العربية السعودية.</p> <p>هذه الدراسة تهدف إلى استكشاف تجارب طلاب الامتياز في العلاج الوظيفي فيما يتعلق بتأثيرات التعلم القائم على المشروعات (PBL) عند انتقالهم إلى التدريب في السعودية. سيحاول الباحث اكتشاف كيفية تأثير دورة PBL على ممارسة طلاب امتياز العلاج الوظيفي، لتحديد وجهات نظر طلاب امتياز العلاج الوظيفي للعوامل التمكينية والحواجر خلال الفترة الانتقالية وتحديد وجهات نظر طلاب امتياز العلاج الوظيفي لتأثيرات PBL خلال الفترة الانتقالية.</p> <p>إن مشاركتك في هذه الدراسة طوعية ولك الحق التام في عدم قبول تعبئة الاستمارة أو الانسحاب في أي وقت تشاء بدون ابداء الأسباب ولن يؤثر ذلك على العناية الطبية المقدمة لك حالياً أو في المستقبل في الشؤون الصحية بوزارة الحرس الوطني.</p> <p>لا يجب عليك التوقيع على ورقة المعلومات هذه، فقط عليك الاختيار موافق / غير موافق بمجرد قبولك تعبئة هذا الاستبيان يعتبر بمثابة إقرارك بالموافقة على المشاركة في هذا البحث.</p> <p>ستبقى الردود على الأسئلة سرية ومع ذلك، فإن العمل عن طريق البريد الإلكتروني والانترنت يبقى هناك احتمال الاختراق خصوصية البيانات وسرية المعلومات ولكن بالرغم من هذه الاحتمالية تبقى الاخطار البدنية والعاطفية والاجتماعية والمهنية والمالية المترتبة عليك ضمن الحد الأدنى من الخطورة.</p> <p>إذا كان لديك أي أسئلة حول هذا البحث، يرجى الاتصال [REDACTED] كلية العلوم الطبية التطبيقية، لبريد الإلكتروني: [REDACTED] هاتف: + [REDACTED] تحويلة [REDACTED]</p> <p>في حال كان لديك الاستفسارات المتعلقة بحقوقك كموضوع بحث يمكنك الاتصال بمجلس المراجعة المؤسسية على هاتف [REDACTED] تحوياً [REDACTED]</p>
<input type="checkbox"/> Agree to participate <input type="checkbox"/> Disagree to participate	<input checked="" type="checkbox"/> موافق على المشاركة <input type="checkbox"/> غير موافق على المشاركة
<p style="color: red;">This information shall not be used, disclosed, or published without written approval from [REDACTED] Research Center</p>	
Version No. : (1)	Version Date: 1-12-2020
Non-Clinical Form Rev. 11/2014 Ref# APP 1419-05 Page 1 of 2 Appendix J O&M # 1054	

Appendix 11: Cardiff University School of Healthcare ethical Committee approval.



School of
Healthcare Sciences
Ysgol y Gwyddorau
Gofal Iechyd

Interim Head of School and Dean /Pennaeth yr Ysgol Dros Dro a Deon Professor David Whitaker

Faris Abaalkhayl
School of Healthcare Sciences
Cardiff University

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Tel
Email
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Prifysgol Caerdydd
Ty Eastgate
35 - 43 Heol Casnewydd
Caerdydd
Tel
Email
www.caerdydd.ac.uk

Dear Faris

Research project title: Saudi Arabian Occupational Therapy Students' Experiences of Problem Based Learning and Their Transition to Practice

SREC reference: 713

The HCARE Research Ethics Committee Chair has reviewed the amendments to the above application

Ethical Opinion

The Committee Chair gave a favourable ethical opinion of the above application on the basis described in the application form, protocol and supporting documentation.

Amendments

Any substantial amendments to documents previously reviewed by the Committee must be submitted to the Committee to HCAREEthics@cf.ac.uk for consideration and cannot be implemented until the Committee has confirmed it is satisfied with the proposed amendments.

You are permitted to implement non-substantial amendments to the documents previously reviewed by the Committee but you must provide a copy of any updated documents to the Committee [via INSERT DETAILS] for its records.

Monitoring requirements

The Committee must be informed of any unexpected ethical issues or unexpected adverse events that arise during the research project.

The Committee must be informed when your research project has ended. This notification should be made to HCAREEthics@cf.ac.uk within three months of research project completion.

Documents reviewed by Committee



Registered Charity No. 1136855
Elusen Gofrestredig Rhif. 1136855

Complaints/Appeals

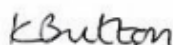
If you are dissatisfied with the decision made by the Committee, please contact [SCHOOL ETHICS OFFICER] in the first instance to discuss your complaint. If this discussion does not resolve the issue, you are entitled to refer the matter to the Head of School for further consideration. The Head of School may refer the matter to the University Research Integrity and Ethics Committee (URIEC), where this is appropriate. Please be advised that URIEC will not normally interfere with a decision of the Committee and is concerned only with the general principles of natural justice, reasonableness and fairness of the decision.

Please use the Committee reference number on all future correspondence.

The Committee reminds you that it is your responsibility to conduct your research project to the highest ethical standards and to keep all ethical issues arising from your research project under regular review.

You are expected to comply with Cardiff University's policies, procedures and guidance at all times, including, but not limited to, its Policy on the Ethical Conduct of Research involving Human Participants, Human Material or Human Data and our Research Integrity and Governance Code of Practice.

Yours sincerely,



Senior Lecturer
Director of Research Governance

c.c. Steve Whitcombe & Teena Clouston



Registered Charity No. 1136855
Elusen Gofrestredig Rhif. 1136855

Appendix 12: KSA ethical approval from IRB.



Study Number: **SP20/505/R**
 Study Title: **Saudi Arabian Occupational Therapy Students' Experiences of Problem Based Learning and Their Transition to Practice.**
 Study Sponsor: **Non grant**
 IRB Approval Date: **31 December 2020**
 IRB Review Type: **Expedited Review** **Full Board**
 Study site(s): **Central Region**

Dear [Redacted]

[Redacted]
 Ministry of National Guard - Health Services

Sub-investigator/s – Faris Abaalkhayl

After reviewing your submitted research proposal/protocol and related documents, the **IRB has APPROVED** the submission. The approval includes the following related documents:

Document/Title	Version	Date
Research Proposal	01	31 December 2020
Data Collection Form	01	31 December 2020
Inform Consent Form	01	31 December 2020

The approval of the research study is valid for **one year** from the above approval to expiration date.

Terms of Approval:

- **Annual Reports:** An Annual report must be submitted for approval to avoid termination/suspension of your research.
- **Financial report:** If your study is funded project, details financial report should be submitted with the scientific report.
- **Final Report:** After completion of the study, a final report must be forwarded to the IRB.
- **Retention of original data:** The PI is responsible for the storage and retention of original data pertaining to the project for a minimum of five years.
- **Reporting of adverse events or unanticipated problems:** The PI is responsible to report any serious or unexpected adverse events or unanticipated problems, which could involve any risk to participants or others, or any event on incidents that may have impact on the research or participants.
- **Biological samples:** No biological samples to be shipped out of the Kingdom of Saudi Arabia without prior IRB approval.
- **Participant incentives:** No financial compensation or gifts to be given to participants without prior IRB approval.
- **Storage of biological samples:** All biological samples collected for the purpose of this research must be stored in the KAIMRC related repository.
- You will need to resubmit the proposal to the IRB for review and re-approval before implementing any changes to the approved proposal.
- It is possible that the IRB may decide that the proposed new changes may exclude the proposal from being accepted for exempt review.
- It is your responsibility to safely store the data collected.
- Please note that phone based surveys are not permitted.
- If your approved proposal requires access to Bestcare, please write to the IRB informing them of the name of the designated data collector and exactly define the period requested for collecting data. Do not start the data collection until an approval memo is issued from the IRB giving permission to that collector to start accessing Bestcare for the duration of the project and after signing a confidentiality agreement.



12 JAN 2021



Appendix 13: Semi-structured interview guide.

Interview guide



Semi-Structured Interview:

Research question:

What are the experiences of occupational therapy internship students' regarding the influences of Problem-Based learning when they move to practice in Saudi Arabia?

Before starting the interview:

- Introduce myself, briefly summarise and state the aim of the study.
- Thank participant for agreeing to partake in the study.
- Allow time for further questioning and answering any concerns about the research project before proceeding.
- Ensure participant information sheet and consent form have been read and signed by participant.
- Remind/reconfirm that the interview session will be audio-recorded.
- Assure participant of confidentiality.

Interviewee's background

Pre-intern: occupational therapy education

- In which university did you study for a qualification in OT?
- As you know, different universities offer different structures of the OT PBL course. Do you mind telling me how was your course delivered?
 - *Was it PBL-based, hybrid PBL (lecture-based and PBL-based), does it include placements, clinics training and how can you describe it?*
 - *If you have had past clinical training or placement experiences working as OT in any place, can you tell me more about your past experiences?*
- How was PBL worked in your institution? What was the process?
- What topics did you covered in PBL course? Was it different from other courses? How?
- What skills did you learn from PBL course?
- What was it like being a PBL students? In wat ways have changed you as a person?

Clarification of internship experience to date

- How long have you been working as intern student?
- Which settings were you in? What did you do? Can you describe your experience in those settings?
 - *How did you find the different settings and are there any similarities or differences?*
 - *How did you manage yourself with those similarities and differences in internship programme?*

Interview central questions:

The influences of PBL course for OT students' (during university time)

- Was PBL course meaningful for you? If so how? If not why?
- Tell me about any preparation for practice from OT program?
- Do you feel PBL course has prepared you for practice?
If yes:
 - *Can you describe how?*
 - *What aspects were most useful?*If no:
 - *Why? what made this difficult? What was missing?*

PBL course influences on internship period.

- Can you tell me about your experience when you first transitioned from being a student in University to being an OT intern?
 - *How did you adapt yourself with the change?*
- In what way has PBL influenced your transition to internship?
 - *Can you tell me more?*
- Do you think the skills and knowledge that you learnt in PBL course have influenced your practice? If so how? If not what was missing?
 - *What aspects were most useful?*
- Were you able to apply the skills and knowledge that you have learned in PBL course into hospital/ practice context?
If yes:
 - *Can you describe how did you transfer it to hospital?*
 - *What are the things that helped you?*
 - *Are there any things that prevented transfer of what you learned in PBL course into hospital? How (describe)?*If no:
 - *What made this difficult?*
- What are the things that have enabled you during internship period?
 - *Can you describe how?*
 - *Is there any relationship among what you have learned in PBL course and the things that have enabled you during internship period?*
- What are the things that have challenged you during internship period?
 - *Can you tell me more about that challenge?*
 - *How did you manage around those challenges?*Is there any relationship between this challenging and what you have learned in PBL course?
- Do you have any suggestions for university or internship place that might improve OT internship student experience?

Ending the interview

- Ask interviewee if they would like to add anything to the interview.
- Thank participant again for their time and willingness to partake in the study.
- Reassure that transcripts will be returned via email and amendments could be arranged if necessary.

Appendix 14: Example of hard copy transcript of the texts.

عنها التي هي الانترديسبلتري والقروب انترفينشن، صح، هل كان بوضعها كان نفس الي بي ال ولا كان لها نظام ثاني؟ الا صح نفس النظام بس انا قلتلك انه ماكان يطبق ١٠٠٪، يعني أحيانا يبدأ الكلاس، يحط عند كل قروب كيس، انا نتناقش عن هذا الكيس ينتهي الكلاس أحيانا الكيس ماعطيناه حقه بزيادة يجي للكلاس الي بعده نروح سكب للكيس الي بعده، اها، بس يعني كا شكلا يعني اذا تبي نتكلم هل يطبق او لا او كيه يعتبر سويتاه ان كل قروب بدأ يأخذ كيس بدأ يناقش فيه أكثر نتكلم عنه بشكل بسيط أحيانا ثم خلاص، مانوصل الى إجابات نهائية غالبا يعني، جيد جيد.

➤ What topics did you covered in PBL course? Was it different from other courses? How?

غالبا شف بعض المواد مثلا بالنبرو كنا أحيانا نتكلم عن يعطيك مثلا انا يعطيك عن كيس معين فترة كان يتكلم عن البرهنق مالبزهنق، يعطيك كيس معين، طيب، بالخير يقولك ايش البرهنق اللي تشوفه مناسب لهذي الكيس، همتاز، الانترديسبلتري كنا نتكلم بالبداية عن كيس كان يتكلم عن الفملي كيس الام وبتنها من البداية كيف تعامل البنت ثم يبدون ينتقلون حبة حبة الي راحت المستشفى وتطورت حالتها، كان كل كلاس ناخذ بارت معين ونتكلم عنها كانها قصة يعني، جيد، نتكلم عنها ونتناقش كيف تصرف البنت كان كيف الام كيف تعامل الدكتور معهم من ذي الناحية، هذا الانترديسبلتري هاه؟، ايه هذا الانترديسبلتري كان زي القصة، جيد، كانت بلك كامل كان اول اربع خمس كلاسات، بعدها انتقلنا الى مقالات صارت زي المقالات ونناقش المقالات. طيب والقروب انترفينشن كيف كان تقريبا الي بي ال حقها؟ القروب انترفينشن كانت كل قروب لحالة قلت لك هذي الفكرة نفس الاسايمنت كل قروب، اها، يمسك موضوع لحاله كيس يتكلم عنه يعني ماكان بشكل عام كل القروبات تحضر، قروب يحضر يحضر عدد قليل مو دايم كل الطلاب يحضرون فيه، اها، بس انه خلاص يصير القروب الي يمسك الكيس هذا حاضرين ٥ تقريبا تقسما اذكر ٥ او ٦ قروبات، اها، كل قروب كان تقريبا ٤ اشخاص، كلكم اوتي ولا مختلف؟ لا كلنا كنا اوتي، همتاز اسلم، كانت فكرته اننا نمسك كيس الكيس مقسم الى ٤ اقسام، اها، حنا ٤ كل شخص يبدأ يتكلم عن الكيس من ناحية معينة يعني، ونبدأ نتناقش سوا كاقروب، وانا في الأخير نطلع حلول نطلع انا يعني يكون القروب الانترفينشن مرتب اننا نبدأ المشكلة نبدأ نشرح للموجودين معنا نعطيم مثلا الاكثيفتي اللي هذا ثم نبدأ نتناقش ونشوف الحلول ثم نشوف يعني هالطريقة، جيد. كان خلاص اذا القروب مسك هذا المشكلة ويتكلم، الباقي الكلاس يكون مياشارك بالموضوع بس متفرج، فهمت عليك.

➤ What skills did you learn from PBL course?

انا بالنسبة لي يعني حسنت خلت عندي جرأة أكثر، يعني بالعادة تتخوف تبدي رايبك زي كذا فالي بي ال دايم يكون فيه نقاش قابل للصح والغلط، فابتدا تتجرأ أكثر، يعني صار عندك كنفينس عالي شوي، يكون عالي شوي أكثر تقدر تقول انه ما فيه احد يصير يتخوف من الخطأ والصح لأنه في الأخير تدري ان هذا نقاش عادي تقترح فكرة بتقول شي عندك نقطة، انا تبتدا تتجرأ أكثر تسولف أكثر تناقش أكثر، اها، احس انه بعد تنمي عندك القيادة شوي او تحمل مسؤولية خاصة اذا تقسما الى قريات غالبا القروب يولي واحد يتكلم عنه عرفته، في الأخير عشان مايكون فيه انا تسمعني أستاذ فارس، ايه اسمك اسمك... انا أتكلم مثلا في القروب ممتاز كنا أربعة او ٥ نتكلم عن نقطة واحدة خلاص نتفق تناقشنا مع بعض خلاص انت ي فلان تبتدا تتكلم عنها عن القروب، فا تنمي المهارة عندك هذي، فاول يعني انت لما كنت لحالك تتكلم زي كذا تقدر تقول ماراح ابدي رايب ماراح أتكلم بس كاقروب مثلا اليوم حنا نفس القروب الكلاس هذا هذا يتكلم والكلاس الجاي خلاص واحد ثاني يتكلم فاتعطي جرأة أكثر تعطي قيادة للشخص، تخلي عنده ارتياحية أكثر انه يبدي رايه، جيد، يتقبل راي الاخرين عادي، تقوي عندك مهارات الكمنيكيشن مع الثانيين، الكمنيكيشن جيد.

➤ What was it like being a PBL students? In wat ways have changed you as a person?

تقريبا نفس ماقلت لك، بالنسبة لي انا كاهخص كنت غالبا في الكلاسات أكون انا اذا كنت متلقي من الدكتور فالدكتور لما يسأل ما أكون حريص مرة انا اشارك واعطي راي وزي كذا، خلاف الي بي ال كنا خلاص كنا تدري ان كل قروب لحاله، كل قروب قاعد يتناقش، تدري كل قروب بلحظة من الكلاس هذا بيتركز عليه الانتظار ٤ او ٥ دقائق عشان تأخذ الرأي منه يأخذون راي يأخذون الكلام مناه، ابدز اضطر شوي أقول لازم أتكلم، لازم ابدي رايب لازم أتكلم، لازم اعطي نقطة لازم اشارك، فانفس ماعلمتك، تقوي الكمنيكيشن عندك، تخلي عندك ثقة أكبر بنفسك شوي، جيد ممتاز

Clarification of internship experience to date

➤ How long have you been working as intern student?

انا، تبقى كم لي صافي داومت او بشكل عام متى بديت ومتى بنتهي؟ يعني كم شهر تقريبا واثت طالب امتياز؟ انا الحين تقريبا ١١ شهر، ماهاء الله، انا بالشهر الأخير جالبا لكن فعليا الدوام الفعلي تقريبا داومت بشكل مستمر انا ثلاث شهور متصلة الى ٤ شهور، والاهكالية كلها عشان كوفيد هاه؟ بالنسبة لي اول ٦ شهور ماكان دوام فعلي، كنا ندوم الأربعة الخمس يومين، انا اربعا تبتدا تداوم على ماتخش مود الدوام شوي الخمس ويكند، فاا ماكان ماتخش انك مندمج بمود الدوام، عكس فترة

86 كامل كان اول اربع خمس كلاسات، بعدها انتقلنا الى مقالات صارت زي
87 المقالات وناقش المقالات. طيب والقروب انترفينشن كيف كان تقريبا البي
88 بي ال حقها؟ القروب انترفينشن كانت كل قروب لحالة قلت لك هذي الفكرة
89 نفس الاسايمنت كانتن كل قروب، اها، يمस्क موضوع لحاله كيس يتكلم
90 عنه يعني ماكان بشكل عام كل القروبات تحضر، قروب يحضر يحضر عدد
91 قليل مو دايم كل الطلاب يحضرون فيه، اها، بس انه خلاص يصير القروب
92 اللي يمस्क الكيس هذا حاضرين 5 تقريبا تقسمنا اذكر 5 او 6 قروبات، اها،
93 كل قروب كان تقريبا 4 اشخاص، كلکم اوتي ولا مختلف؟ لاكلنا كنا اوتي،
94 ممتاز اسلم، كانت فكرته اننا نمسك كيس الكيس مقسم الى 4 اقسام، اها،
95 حنا 4 كل شخص يبدأ يتكلم عن الكيس من ناحية معينه يعني، ونبدأ نتناقش
96 سوا كاقروب، وانا في الأخير نطلع حلول نطلع انا يعني يكون القروب
97 الانترفينشن مرتب اننا نبدأ المشكلة نبدأ نشرح للموجودين معنا نعطيهم مثلا
98 الاكثيفيبي للشبي هذا ثم نبدأ نتناقش ونشوف الحلول ثم نشوف يعني
99 هالطريقة، جيد. كان خلاص اذا القروب مسك هذا المشكلة ويتكلم، الباقي
100 الكلاس يكون مايشارك بالموضوع بس متفرج، فهتمت عليك.
101
102 > What skills did you learn from PBL course?
103 انا بالنسبة لي يعني حسنت خلت عندي جرأة اكثر، يعني بالعادة تتخوف تبدي
104 رايك زي كذا فالبي بي ال دايم يكون فيه نقاش قابل للصح والغلط، فاتبدأ تتجرأ
105 اكثر، يعني صار عندك كنفيشنس عالي شوي، يكون عالي شوي اكثر تقدر تقول انه
106 مافيه احد يصير يتخوف من الخطأ والصح لأنه في الأخير تدري ان هذا نقاش
107 عادي تقترح فكرة بتقول شي عندك نقطه، انا تبدأ تتجرأ اكثر تسولف اكثر تناقش
108 اكثر، اها، انا احس انه بعد تنمي عندك القيادة شوي او تحمل مسؤولية خاصة
109 اذا تقسمنا الى قريات غالبا القروب يولي واحد يتكلم عنه عرفت، في الأخير عشان
110 مايكون فيه انا تسمعي أستاذ فارس، ايه اسمعك اسمعك ...، أنكلم مثلا في
111 القروب ممتاز كنا أربعة او 5 نتكلم عن نقطة واحدة خلاص نتفق مثلا تناقشنا مع
112 بعض خلاص انت ي فلان تبدأ تتكلم عنها انا عن القروب، ف تنمي المهارة عندك
113 هذي، فاول يعني انت لما كنت لحوالك تتكلم زي كذا تقدر تقول ماراح ابدي راي
114 ماراح أنكلم بس كاقروب مثلا اليوم حنا نفس القروب الكلاس هذا هذا يتكلم
115 والكلاس الجاي خلاص نتناقش واحد ثاني يتكلم فاتعطي جرأة اكثر تعطي قيادية
116 للشخص، تخلي عنده ارتياحية اكثر انه يبدي رايه، جيد، يتقبل راي الاخرين
117 عادي، تقوي عندك مهارات الكمنيكيشن مع الثانين، الكمنيكيشن جيد،
118
119 > What was it like being a PBL students? In wat ways
120 have changed you as a person?
121 تقريبا نفس ماقلت لك، بالنسبة لي انا كاشخص كنت غالبا في الكلاسات
122 اكون انا اذا كنت متلقي من الدكتور فالدكتور لما يسأل ما اكون حريص
123 مرة انا اشارك واعطي راي وزبي كذا، خلاف البي بي ال كنا خلاص كنا
124 ندرى ان كل قروب لحال، كل قروب قاعد يتناقش، ندرى كل قروب
125 بلحظة من الكلاس هذا بيتركز عليه الانظار 4 او 5 دقايق عشان نأخذ
126 الرأي منه يأخذون راي يأخذون الكلام مننا، فا ابدأ اضطر شوي أقول
127 لازم أنكلم، لازم ابدي راي لازم أنكلم، لازم اعطي نقطة لازم اشارك،
128 فانفس ما علمتك، تقوي الكمنيكيشن عندك، تخلي عندك ثقة أكبر
129 بنفسك شوي، جيد ممتاز

Appendix 15: Initial Microsoft Word document of emergent themes.

Lines 14-39 (how was course delivered, if was any past clinical training)

- 80% of course was delivered through traditional method.
- He believed that PBL was not mandatory as much as it is the diligence from doctor.
- Had fieldwork 3 modules, observation 3 times/week.
- Had previous clinical training e.g., neuro, positioning, pediatric, PROM, was on dolls not realistic.

Lines 40-73 (how was PBL work, what was the process)

- University did not focus on PBL.
- PBL course was neuro, interdisciplinary, group intervention.
- There was not certain process in PBL, it was diligence from doctor.
- Had three groups or more, every group speak, gives their opinion, discusses points.
- Sometime in PBL every group talk about its own cases.
- PBL was little.
- PBL was not applied 100%.
- Sometimes PBL class ends, and they did not give the cases its right. (Not full cover the case).

Lines 75-100 (topic covered in PBL)

- Topic covered in neuro PBL, cases about positioning.
- Topic covered in interdisciplinary, cases talked about family, mother and her daughter's.
- Talk and discuss in PBL.
- Interdisciplinary was as story.
- Group intervention was every group alone with different cases, and in final they try to find solution.

Lines 102- 117 (skills learned in PBL course)

- PBL let him to become more daring, as usually he afraid to express his opinion.
- In PBL discussion subject to right and wrong, so he become more daring and more confidence.
- He felt PBL developed his leadership skills.
- He felt PBL let him take responsibility or been responsible.
- PBL let him to be more courage.
- Felt PBL gives leadership skills to a person.
- PBL make him more satisfied that he expresses his opinion.
- PBL let him accepts the opinion of others.
- PBL improved his communication skills,

Line 119-129 (being a PBL students, changed you as a person)

- In traditional course, when doctor asked, he was not keen to participate and give his opinion. Unlike the PBL where he needs to participate, need to express his opinion, need to discuss, need to speech.
- PBL strengthens his communication.
- PBL make him more confidence in himself.

Lines 132- 141 (working in internship)

- He had 11 months experience in internship (last month now).
- First 5 months he was attend 2day/week due to Covid.
- He does not feel integrated with internship first 5 months due to Covid.
- Last 5 months he attended all days, so he felt that he improved much in this period.

Lines 142-153 (internship settings)

- He covered first 6 months in main hospital N: neuro, ortho and burn. Second 5 months in pediatric hospital N: oncology and general pediatric.

Lines 155- 169 (describe experience)

- He described his experience at beginning, he gains *new information*, see *more cases*, more than what he studied before.
- He felt practice is different from what he read before.
- Reading helped.
- Studying helped.
- He described the first 6 months where the vision was not clear, as it was just 2 day/week.
- Felt benefited from second 5 months and he learned more from it.
- He felt that some arias are specialized, meaning each aria has things for itself.

Lines 170- 177 (manage of self in different settings)

- He adapts himself in different settings by benefited from each area e.g., splint in ortho and burn.

Lines 181- 200 (PBL course meaningful)

- Mohammed felt that PBL was meaningful for him.
- PBL helped by how to deal with preceptor in internship.
- At beginning, he had observation in internship especially if it was new assessments.
- PBL helped in dissuasion with preceptor, follow preceptor, and put points.
- PBL gives him more power in expressing his opinion in internship.
- PBL gives him more power in making observations in internship.
- PBL gives him more power in the discussion in internship.
- PBL strength his daring during studying.
- PBL developed his communication skill during studying.
- PBL increased his leadership skills during studying.
- PBL let him to be responsible to discuss, talk during session.
- PBL let him to be responsible during session.
- He felt PBL strong him to take responsibility and leadership skills.

Lines 201- 215 (Uni preparation for practice)

- He does not believe university prepared him for practice.
- Felt shock when he starts new area as he faced something new.
- Felt practice is very difference from studying, where studying was just basic.
- He believed that he still learns in internship, he is not employer or therapist yet.
- University prepared him to deal with others, to be morally good more than practical, to control yourself, handle pressures, arrange priorities, deal with problems more than practical.
- He does not feel that university prepared him well for practice.

Lines 216- 234 (PBL preparation for practice)

- He felt that PBL prepared him for practice and developed him.
- PBL prepared him how to deal with other, think, discuss more with preceptor, expressing his opinion, strength his daring, which let to feel more confidence and responsible for cases in internship.
- If he does not take PBL before, he will follow the preceptor more than expressing his opinion, thinking or give idea.
- PBL improve his communication more.
- PBL gives him the courage to talk.

Lines 236- 265 (experience when first transitioned to intern)

- He felt at beginning something new, inside a new place, a new experience, everything new.
- Feeling little fear, often fear that he afraid of making a mistake, fear of people speaking about him.
- There was a little fear.
- Feeling a strange new place.
- There was a feeling of lost.
- Feeling adapting with time, accepting more, learning more.
- Felt adapt after two weeks in each area.
- First two weeks in each area was little difficult.
- Felt adapt after two weeks when he was get used to the routine, the system, adapt more and keep developing permanently.
- He did not feel that he was prepared well for practice.
- Felt better in the second period of his internship (last 5 months), where he attends daily, and his practice hand skills improved (deal with children, hold the child, do positioning).
- Lack of practical skills at beginning, e.g., child hold.
- with time, he started to apply practical skills, became more comfortable, and developed his skill more.
- He felt that hand on skills (practical skills) developed more in internship.

Lines 267- 285 (PBL influenced internship)

- PBL influenced his internship experience by let him to discuss more and more.
- PBL influenced his internship experience by thinking more.
- PBL influenced his internship experience by knowing the goals.
- PBL influenced his internship experience by knowing the short- and long-term goals.
- PBL influenced his internship experience by teach him how to priorities.

- PBL influenced his internship experience by knowing the short- and long-term goals. 4-8
- PBL influenced his internship experience by teach him how to priorities. 4-9
- PBL influenced his internship experience by knowing the problems that happened. 4-10
- He felt PBL dissuasion was useful. 4-5
- He was not able to apply all what he learned from group intervention (PBL) in hospital contexted, as it was apply in same area in the hospital. 4

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- He believed that skills and knowledge learnt in PBL course had influenced practice. 4
- As knowledge, it influenced his practice where he was discussing in groups, each group has a point of view, has an opinion, it gives him new information, and modified his false information. 4-5, 4-2, 4-11
- PBL let the knowledge (discussing) stick to his mind. 4-11
- PBL let to read the information very fast. 4-12
- PBL let to search for information. (emphasize). 4-13
- As skills, communication influenced his practice from PBL. 4-3
- Dissection influenced his practice. 4-5
- PBL let him to *become bold*. 4-2
- PBL improved his leadership skills. 4-1
- PBL improved his search skills. 4-13
- PBL let him contrast and accepting opinions. 4-2
- PBL let him to be responsible. 4-8
- PBL improved his communication. 4-3

Lines 314- 334 (ability to apply skills and knowledge learned in PBL course into hospital context)

- He acknowledged that he was able to apply skills and knowledge learned from PBL course into hospital context, but not all of them, more than 50% (apply and benefit from it). e.g., positioning. 4
- He felt previous dissection in PBL was helpful in internship. 4-5

Lines 335- 344 (things not allowed apply skills and knowledge learned in PBL course)

- He believed that there was nothing prevent him to apply the skills or knowledge learned from PBL course in hospital. 4

Lines 346- 384 (enables during internship period)

- Peer discussion helped during his transition. 5-4
- Peers' assistance helped by made his transition easier. 5-4
- Family helped him as they were considerate, cooperating with him, and this helped him in internship. 5-5
- Hospital environment helped especially in the first period where the approaching age for him and the staff, so the ages are almost close to each other, they know the way of his thinking. 5-6
- Preceptor helped by developing interns, deal with them as friends. 5-7
- He acknowledged that the working environment helps his productivity, strengthen himself, and let him more self-confidence. 5-6

- Supervisors and all staff were cooperative during internship. 5-7
- He felt that most discussion with his friend's during internship was similar to PBL, which help him during transition. 5-4

Lines 385- 411 (challenged during internship period)

- First area was most difficult period in his internship. B-3
- He faced challenge in burn area, as it was different from other area, cases that he saw, patient areas were a little uncomfortable for him to look at. B-3
- Staff were cooperative in burn area and understandable. 5-7
- There was a need for time to adapt. 3-5
- Burn area was most difficult period. B-3
- He forced himself to adapt. 5-3
- Trying to work | trying to apply helped to adapt especially in burn which he forced himself. 5-3
- He needs time to adapt. 3-5
- He did not believe that there was a relationship between challenged that he faced and PBL course. 6

Lines 412- 439 (suggestions for university)

- Lack of having real practical during university time. 1-4
- Not go to hospital lots during university period, usually observation. 1-4
- Need more practical in hospital during university period. 1-4
- Feeling shocked when he starts internship as he faced something different from what he studied. 3-4
- There was a feeling new in everything that he faced in internship. 3-3
- There was no update in practical during university period. 1-4
- Need to update the practical during university period. 1-4
- Need to have hands on patient during practice in university period not just observation. 1-4

Lines 441- 468 (suggestions for internship place)

- During Covid period, lots of thing has changed. 6-1
- There was no place or room for interns in hospital environment first period (6 months). 6-4
- Need lectures during internship, at least once a week. 6-4

Appendix 16: Microsoft Word document of superordinate emergent themes.

Tables of Themes

<p>B-1- University experience background.</p>
<p>Lines 14-39 (how was course delivered, if was any past clinical training)</p> <ul style="list-style-type: none">• 80% of course was delivered throw traditional mothed. B-1• He believed that PBL was not mandatory as much as it is the diligence from doctor. B-1 <p>Lines 40-73 (how was PBL work, what was the process)</p> <ul style="list-style-type: none">• University did not focus on PBL. B-1• PBL course was neuro, interdisciplinary, group intervention. B-1• There was not certain process in PBL, it was diligence from doctor. B-1• Had three group or more, every group speak, gives their opinion, discusses points. B-1• Sometime in PBL every group talk about its own cases. B-1
<p>B-2- Previous practice background.</p>
<p>Lines 14-39 (how was course delivered, if was any past clinical training)</p> <ul style="list-style-type: none">• Had fieldwork 3 modules, observation 3time/week. B-2• Had previous clinical training e.g., neuro, positioning, pediatric, PROM, was on dolls not realistic. B-2
<p>B-3- Internship experience background.</p>
<p>Lines 132- 141 (working in internship)</p> <ul style="list-style-type: none">• He had 11 months experience in internship (last month now). B-3• First 5 months he was attend 2day/week due to Covid. B-3, 6-1• Last 5 months he attended all days, so he felt that he improved much in this period. B-3 <p>Lines 142-153 (internship settings)</p> <ul style="list-style-type: none">• He covered first 6 months in main hospital N: neuro, ortho and burn. Second 5 months in pediatric hospital N: oncology and general pediatric. B-3 <p>Lines 181- 200 (PBL course meaningful)</p> <ul style="list-style-type: none">• At beginning, he had observation in internship especially if it was new assessments. B-3 <p>Lines 201- 215 (Uni preparation for practice)</p> <ul style="list-style-type: none">• He believed that he still learns in internship, he is not employer or therapist yet. B-3

Lines 236- 265 (experience when first transitioned to intern)

- First two weeks in each area was little difficult. B-3, 3-5
- He felt that hand on skills (practical skills) developed more in internship. B-3

Lines 385- 411 (challenged during internship period)

- He faced challenge in burn area, as it was different from other area, cases that he saw, patient areas were a little uncomfortable for him to look at. B-3
- Burn area was most difficult period. B-3

1- University experience

1-1 Limits of PBL course

Lines 40-73 (how was PBL work, what was the process)

- PBL was little. 1-1
- PBL was not apply 100%. 1-1
- Sometimes PBL class ends, and they did not give the cases its right. (Not full cover the case). 1-1

1-2- PBL topics and described.

Lines 75-100 (topic covered in PBL)

- Topic covered in neuro PBL, cases about positioning. 1-2
- Topic covered in interdisciplinary, cases talked about family, mother and her daughter's. 1-2
- Talk and discuss in PBL. 1-2
- Interdisciplinary was as story. 1-2
- Group intervention was every group alone with different cases, and in final they try to find solution. 1-2

1- 3 Impact of PBL during university

Lines 102- 117 (skills learned in PBL course)

- PBL let him to become more daring, as usually he afraid to express his opinion. 1-3 A
- In PBL discussion subject to right and wrong, so he become more daring and more confidence. 1-3 A F
- He felt PBL developed his leadership skills. 1-3 B
- He felt PBL let him take responsibility or been responsible. 1-3 C

- PBL let him to be more courage. 1-3 A
- PBL let him accepts the opinion of others. 1-3 D
- PBL improved his communication skills. 1-3 E

Line 119-129 (being a PBL students, changed you as a person)

- In traditional course, when doctor aske, he was not keen to participate and give his opinion. Unlike the BBL where he needs to participate, need to express his opinion, need to discuss, need to speech. 1-3 A
- PBL make him more confidence in himself. 1-3 F

Lines 181- 200 (PBL course meaningful)

- PBL strength his daring during studying. 1-3 A
- PBL developed his communication skill during studying. 1-3 E
- PBL increased his leadership skills during studying. 1-3 B
- PBL let him to be responsible to discuss, talk during session. 1-3 C
- PBL let him to be responsible during session. 1-3 C
- He felt PBL strong him to take responsibility and leadership skills. 1-3 C B

1-4- Preparedness for practice.

Lines 201- 215 (Uni preparation for practice)

- He does not believe university prepared him for practice. 1-4
- University prepared him to deal with others, to be morally good more than practical, to control yourself, handle pressures, arrange priorities, deal with problems more than practical. 1-4
- He does not feel that university prepared him well for practice. 1-4

Lines 216- 234 (PBL preparation for practice)

- He felt that PBL prepared him for practice and developed him. 1-4

Lines 236- 265 (experience when first transitioned to intern)

- He did not feel that he was prepared well for practice. 1-4

Lines 412- 439 (suggestions for university)

- Lack of having real practical during university time. 1-4
- Not go to hospital lots during university period, usually observation. 1-4
- Need more practical in hospital during university period. 1-4
- There was no update in practical during university period. 1-4
- Need to update the practical during university period. 1-4
- Need to have hands on patient during practice in university period not just observation. 1-4

3-Internship experience

3-1- Internship description

Lines 155- 169 (describe experience)

- He described his experience at beginning, he gains *new information, see more cases*, more than what he studied before. 3-1
- He described the first 6 months where the vision was not clear, as it was just 2 day/week. 3-1, 6-1
- Felt benefited from second 5 months and he learned more from it. 3-1
- He felt that some arias are specialized, meaning each aria has things for itself. 3-1

3-2- Theory practice gap

Lines 155- 169 (describe experience)

- He felt practice is different from what he read before. 3-2, 6-3

3-3- something new

Lines 201- 215 (Uni preparation for practice)

- Felt shock when he starts new area as he faced something new. 3-3, 3-4

Lines 236- 265 (experience when first transitioned to intern)

- He felt at beginning something new, inside a new place, a new experience, everything new. 3-3

Lines 412- 439 (suggestions for university)

- There was a feeling new in everything that he faced in internship. 3-3

3-4- different feeling, shock, fear, strange, lost

Lines 201- 215 (Uni preparation for practice)

- Felt shock when he starts new area as he faced something new. 3-3, 3-4
- Felt practice is very difference from studying, where studying was just basic. 3-4

Lines 236- 265 (experience when first transitioned to intern)

- Feeling little fear, often fear that he afraid of making a mistake, fear of people speaking about him. 3-4
- There was a little fear. 3-4
- Feeling a strange new place. 3-4
- There was a feeling of lost. 3-4

Lines 412- 439 (suggestions for university)

- Feeling shocked when he starts internship as he faced something different from what he studied. 3-4

3-5- Time needed

Lines 236- 265 (experience when first transitioned to intern)

- Feeling adapting with time, accepting more, learning more.3-5
- Felt adapt after two weeks in each area. 3-5
- First two weeks in each area was little difficult. B-3, 3-5
- Felt adapt after two weeks when he was get used to the routine, the system, adapt more and keep developing permanently. 3-5
- Felt better in the second period of his internship (last 5 months), where he attends daily, and his practice hand skills improved (deal with children, hold the child, do positioning). 3-5
- with time, he started to apply practical skills, became more comfortable, and developed his skill more. 3-5

Lines 385- 411 (challenged during internship period)

- There was a need for time to adapt. 3-5
- He needs time to adapt. 3-5

4- PBL Impact on practice

Lines 181- 200 (PBL course meaningful)

Lines 267- 285 (PBL influenced internship)

- He was not able to apply all what he learned from group intervention (PBL) in hospital contexted, as it was apply in same area in the hospital. 4

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- He believed that skills and knowledge learnt in PBL course had influenced practice. 4

Lines 314- 334 (ability to apply skills and knowledge learned in PBL course into hospital context)

- He acknowledged that he was able to apply skills and knowledge learned from PBL course into hospital context, but not all of them, more than 50% (apply and benefit from it). e.g., positioning. 4

Lines 335- 344 (things not allowed apply skills and knowledge learned in PBL course)

- He believed that there was nothing prevent him to apply the skills or knowledge learned from PBL course in hospital. 4

4- 1- leadership skills

Lines 102- 117 (skills learned in PBL course)

- Felt PBL gives leadership skills to a person. 4-1

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- PBL improved his leadership skills. 4-1

4-2- Expresses opinion

Lines 102- 117 (skills learned in PBL course)

- PBL make him more satisfied that he expresses his opinion. 4-2

Lines 181- 200 (PBL course meaningful)

- PBL gives him more power in expressing his opinion in internship. 4-2
- PBL gives him more power in making observations in internship. 4-2

Lines 216- 234 (PBL preparation for practice)

- PBL prepared him how to deal with other, think, discusses more with preceptor, expressing his opinion, strength his daring, which let to feel more confidence and responsible for cases in internship. 4-4, 4-6, 4-5, 4-2, 4-7, 4-8
- If he does not take PBL before, he will follow the preceptor more than expressing his opinion, thinking or give idea.4-2
- PBL gives him the courage to talk. 4-2

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- As knowledge, it influenced his practice where he was discussing in groups, each group has a point of view, has an opinion, it gives him new information, and modified his false information. 4-5, 4-2, 4-11
- PBL let him to *become bold*. 4-2
- PBL let him contrast and accepting opinions. 4-2

- As knowledge, it influenced his practice where he was discussing in groups, each group has a point of view, has an opinion, it gives him new information, and modified his false information. 4-5, 4-2, 4-11
- Dissection influenced his practice. 4-5

Lines 314- 334 (ability to apply skills and knowledge learned in PBL course into hospital context)

- He felt previous dissection in PBL was helpful in internship. 4-5

4-6- Thinking

Lines 216- 234 (PBL preparation for practice)

- PBL prepared him how to deal with other, think, discusses more with preceptor, expressing his opinion, strength his daring, which let to feel more confidence and responsible for cases in internship. 4-4, 4-6, 4-5, 4-2, 4-7, 4-8

Lines 267- 285 (PBL influenced internship)

- PBL influenced his internship experience by thinking more. 4-6

4- 7- Confidence

Lines 216- 234 (PBL preparation for practice)

- PBL prepared him how to deal with other, think, discusses more with preceptor, expressing his opinion, strength his daring, which let to feel more confidence and responsible for cases in internship. 4-4, 4-6, 4-5, 4-2, 4-7, 4-8

4- 8- Become responsible.

Lines 216- 234 (PBL preparation for practice)

- PBL prepared him how to deal with other, think, discusses more with preceptor, expressing his opinion, strength his daring, which let to feel more confidence and responsible for cases in internship. 4-4, 4-6, 4-5, 4-2, 4-7, 4-8

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- PBL let him to be responsible. 4-8

4- 9- Knowing the goals

Lines 267- 285 (PBL influenced internship)

- PBL influenced his internship experience by knowing the goals. 4-8
- PBL influenced his internship experience by knowing the short- and long-term goals. 4-8

4-10- Priorities

Lines 267- 285 (PBL influenced internship)

- PBL influenced his internship experience by teach him how to priorities. 4-9

4- 11- Knowing the problems

Lines 267- 285 (PBL influenced internship)

- PBL influenced his internship experience by knowing the problems that happened. 4-10

4- 12 Clinical knowledge

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- As knowledge, it influenced his practice where he was discussing in groups, each group has a point of view, has an opinion, it gives him new information, and modified his false information. 4-5, 4-2, 4-11
- PBL let the knowledge (discussing) stick to his mind. 4-11

4- 13 Reading fast

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- PBL let to read the information very fast. 4-12

4- 14 Searching

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- PBL let to search for information. (emphasize). 4-13

- PBL improved his search skills. 4-13

5- Enablers

5-1- Reading

Lines 155- 169 (describe experience)

- Reading helped. 5-1

5-2- Studying

Lines 155- 169 (describe experience)

- Studying helped. 5-2

5-3- Trying to adapt

Lines 170- 177 (manage of self in different settings)

- He adapts himself in different settings by benefited from each area e.g., splint in ortho and burn. 5-3

Lines 385- 411 (challenged during internship period)

- He forced himself to adapt. 5-3
- Trying to work I trying to apply helped to adapt especially in burn which he forced himself. 5-3

5-4- Peers

Lines 346- 384 (enables during internship period)

- Peer discussion helped during his transition. 5-4
- Peers' assistance helped by made his transition easier. 5-4

4-3- Communication skills

Line 119-129 (being a PBL students, changed you as a person)

- PBL strengthens his communication. 4-3

Lines 216- 234 (PBL preparation for practice)

- PBL improve his communication more. 4-3

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- As skills, communication influenced his practice from PBL. 4-3
- PBL improved his communication. 4-3

4-4- Deal with preceptors and others

Lines 181- 200 (PBL course meaningful)

- PBL helped by how to deal with preceptor in internship. 4-4

Lines 216- 234 (PBL preparation for practice)

- PBL prepared him how to deal with other, think, discusses more with preceptor, expressing his opinion, strength his daring, which let to feel more confidence and responsible for cases in internship. 4-4, 4-6, 4-5, 4-2, 4-7, 4-8

4-5 Discussion

Lines 181- 200 (PBL course meaningful)

- PBL helped in dissuasion with preceptor, follow preceptor, and put points. 4-5
- PBL gives him more power in the discussion in internship. 4-5

Lines 216- 234 (PBL preparation for practice)

- PBL prepared him how to deal with other, think, discusses more with preceptor, expressing his opinion, strength his daring, which let to feel more confidence and responsible for cases in internship. 4-4, 4-6, 4-5, 4-2, 4-7, 4-8

Lines 267- 285 (PBL influenced internship)

- PBL influenced his internship experience by let him to discuss more and more. 4-5
- He felt PBL dissuasion was useful. 4-5

Lines 287- 313 (skills and knowledge learnt in PBL course how influenced practice)

- He felt that most discussion with his friend's during internship was similar to PBL, which help him during transition. 5-4

5-5- Family

Lines 346- 384 (enables during internship period)

- Family helped him as they were considerate, cooperating with him, and this helped him in internship. 5-5

5-6- The environment

Lines 346- 384 (enables during internship period)

- Hospital environment helped especially in the first period where the approaching age for him and the staff, so the ages are almost close to each other, they know the way of his thinking. 5-6
- He acknowledged that the working environment helps his productivity, strengthen himself, and let him more self-confidence. 5-6

5-7- Preceptor and staff

Lines 346- 384 (enables during internship period)

- Preceptor helped by developing interns, deal with them as friends. 5-7
- Supervisors and all staff were cooperative during internship. 5-7

Lines 385- 411 (challenged during internship period)

- Staff were cooperative in burn area and understandable. 5-7

6- Barriers

Lines 385- 411 (challenged during internship period)

- He did not believe that there was a relationship between challenged that he faced and PBL course. 6

6-1- Covid impact

Lines 132- 141 (working in internship)

- First 5 months he was attend 2day/week due to Covid. B-3, 6-1
- He does not feel integrated with internship first 5 months due to Covid. 6-1

Lines 155- 169 (describe experience)

- He described the first 6 months where the vision was not clear, as it was just 2 day/week. 3-1, 6-1

Lines 441- 468 (suggestions for internship place)

- During Covid period, lots of thing has changed. 6-1

6-2- Lack of practical skills

Lines 236- 265 (experience when first transitioned to intern)

- Lack of practical skills at beginning, e.g., child hold. 6-2

6-3- Theory practice gab.

Lines 155- 169 (describe experience)

- He felt practice is different from what he read before. 3-2, 6-3

6-4- The environment issues.

Lines 441- 468 (suggestions for internship place)

- There was no place or room for interns in hospital environment first period (6 months). 6-4
- Need lectures during internship, at least once a week. 6-4

Appendix 17: Example of initial noting/ developing emergent themes and English translation transcript.

1 **Semi-Structured Interview transcript (participant 1) Samia, Female**

2 **Research question:**

3 What are the experiences of occupational therapy internship

4 students' regarding the influences of Problem-Based learning

5 when they move to practice in Saudi Arabia?

6 بعد التحية والسلام والشكر على المشاركة واخذ الموافقة من المشارك بالبداية

7 بالمقابلة.

8 **Interviewee's background**

9 **Pre-intern: occupational therapy education**

10 > In which university did you study for a qualification in

11 OT?

12 (مكانة دراسة) درست في جامعة [redacted] في الرياض

13 ولا جدة ولا الشرقية؟ في الرياض، ممتاز

14

15 > As you know, different universities offer different

16 structures of the OT PBL course. Do you mind telling

17 me how was your course delivered?

18 • Was it PBL-based, hybrid PBL (lecture-based and

19 PBL-based), does it include placements, clinics

20 training and how can you describe it?

21 • If you have had past clinical training or placement

22 experiences working as OT in any place, can you tell

23 me more about your past experiences?

24

25 بالنسبة لنا احنا احنا عندنا سنتين تحضيرية وسنتين تخصص، السنتين تخصص

26 هذي امم خذينا فيها المواد كلها للعلاج الوظيفي، فهذي المواد اللي خذيناها كل

27 مادة عن مادة تختلف نظام الدراسة فيها، في مواد كانت تطلب من الالاب ونظري،

28 اها، وفي مواد كانت نظري بس، فيه مواد كانت براكتيكل بس، المواد اللي كانت

29 براكتيكل بس كنا ناخذها بالالاب ويطلبون منا اسابمنت فيها اكثر عكس النظري

30 كانت بس نشغل البرزنتيشن او اسايمنت خلاص او الفايصل ارقام، طبيب بالانسية ل

31 نويلم بيست ليرنون (بلا)، البريلم بيست ليرنين انا الي اقولك اذكرة ما اخذنا فيه

32 الامادة واحدة انتر دسبلتري، خذيناها بالترم السابع اعتقد، ايه بالترم السابع

33 بالسنة الاخيرة اول ترم، هذي المادة الوحيدة.

34

35 > How was PBL worked in your institution? What was the

36 process?

37 كانت عندنا اشلون بيجينا البرسبتر عندنا موضوع واحد مثل كيبس واحدة خذيناها

38 ثلاث اسابيع جيد الكيبس هذي كنا نقاش فيها اكانها ستوري وكنا نقاش فيها

39 الحالة، ايش الأشياء الصح ايش الأشياء الغلط اللي كانت من وجهة نظرنا احنا ايش

40 ممكن انه يساعد هذي الكيبس، ايش الاشياء اللي منتبهنا لها مثل الكير على

41

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→ paying attention to things that they did not think about, such as patient and caregiver.

→ another course of pbl semester to previous one but not same

→ describe group interaction → discuss the main themes

→ prosector evaluates our work at night or not → prosector give feedback

→ not first remember the topic in Pbl course

→ story as pbl

→ describe interdisciplinary

→ considering caregiver & who education was given cases change, things about psychological aspect

→ group intervention

→ felt confined thought before pbl

→ Pbl → thing about family if affect

→ Pbl led to thing about education

→ Pbl led to thing about group interaction

→ feeling opposite of benefits

→ think about thing that affect the lives of older people

→ thinks about ADLs for old people

→ wrong thinking before taking pbl

41 البيشن وعلى الكيريفير، ممتاز، فكنا ناقش هذي الأشياء كلها هذي المادة
 42 الوحيدة. في عندنا مادة ثانية اللي هي قروب انترفينشن، كانت تقريبا تشبه لها بس
 43 مو نفس طريقة التدريس. المادة الأولى كانت في السنة الثالثة او الرابعة وكانت
 44 بالرابعة، والمادة الثانية اللي قتلبي عنها؟ القروب انترفينشن خلي اشيك لك
 45 كانت بالسنة الرابعة بعد بس بالترم الثاني. يعني بالترم الأول وهذي بالترم الثاني؟
 46 ايه. القروب انترفينشن كيف كانت طريقته، كانت تشبه الانترديسبلنري، كنا نتقاسم
 47 از قروب ومثلا... أنت تعرف كيف يصير؟ نعم بس كل جامعة يختلف عن
 48 الجامعة الثانية. قروب انترفينشن كنا كنا نسوي الانترفينشن ات سلف، فيكون
 49 عندنا مثلا ديزينز، وكل قروب يسوي الانترفينشن حقة، اها، فكنا ناقش المحاور
 50 الأساسية كلها من البداية للنهاية كأننا كنا نسوي انترفينشن از قروب، فهذا الشي
 51 الوحيد اللي كان يشبه الانترديسبلنري، طيب ممتاز، في نهاية الانترفينشن هل راح
 52 يكون هناك سليوشن معين وصلتوا له؟ ايه، ممتاز. كنا مثلا كل قروب عنده كانه
 53 ديزينز معين (نسوي قروب انترفينشن، ناخذ فيها الحالة ايش المشاكل اللي فيها،
 54 نسوي زي الاسمنت، الانترفينشن موجود، بعدين البرسبتراكل شوي يقيمننا هل
 55 كان صحيح او لا، يعطينا ايش الفيدباك. جيد ممتاز ممتاز، هذا كان كله في
 56 السنة الرابعة؟ كله كان في السنة الرابعة.

أنا، طبع مادة ثانية
 هل تذكره حين؟
 [استحابة]
 [نصفه / نون]
 [وصف]
 [سنة الرابعة]
 صدق لم نفهم كيف
 الموضوع

> What topics did you covered in PBL course? Was it different from other courses? How?

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 61 اه، دقيقة، قصدك المواضيع حقة الانترديسبلنري، ايه نعم، أما ذكر زي بس خليني
 62 افتح لك المذكرة، ايد مو مشكلة، فقط اذا كنتي تتذكرين الحالات هل كانت
 63 ستروك، او نيروا... كانت الحالات تتكلم عن استوري ثلاث أسابيع عن فيميل
 64 كبيرة بالسن عندها اها يير... شخصوها ايش المشاكل اللي واجهتها، كانت تتكلم
 65 عن كيف حياتها قبل وكيف بعد الديزيين، بعد ما تعالجت او بعد ما تلقت
 66 الانترفينشن كيف الكير قيفر معاها كيف الايديكيشن اعطاه، ايش الأشياء اللي
 67 تغيرت عليها، وكيف انه لازم نركز على السيكولوجل اسبكت، فهذي الأشياء اللي
 68 كانت يعنوننا أيها، طيب ممتاز، المادة الثانية اللي اخذتوها اللي كانت عن
 69 القروب انترفينشن؟ القروب انترفينشن خذينا فيها البرزن (السجن)، اها، اخذينا
 70 مرة هذه، الباقية كانت زي الاسمنت لنا، انترفينشن مشويه يكون على ارثايتيس،
 71 (صحة كاي)
 72 (عطونا كنديشن) وقالوا بالله انتو تسون القروب انترفينشن، غالبا كان عن
 73 جرياتيريك، كبار بالسن. اها كويس. كان فيه بروسبتر بالمادة الثانية يأخذ ويعطي
 74 معكم؟ ايه ايه ايه

[تحدث]
 [استحابة]
 وصف للانترديسبلنري
 مرتبط بـ انترديسبلنري
 فيها PBL بالمنفعة بياجة
 [تحدث]
 وصف للقروب
 تكرار

→ What skills did you learn from PBL course?

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 76 ايه، اوقات اعني قبل اخذها المواد كان نظري محصور شوي، انه كونديشن...
 77 (نبرة كالتة) انترفينشن... خلاص، أما نركز على الفملي اذا هو بيأثر عليهم ولا لا؟ ماكنت اركز
 78 على الايديكيشن او كيف كان الايديكيشن مرة مهم... ماكنت افكر ايدا اسوي قروب
 79 انترفينشن، ماكنت اتوقع لو اجمع اكثر من شخص في ون انترفينشن بيقيد احد،
 80 كنت احسن انه العكس، نتوقعين هذي المهارات اللي اكتسبتها في الكورسين
 81 هذي؟ ايه ايه، ولا كنت افكر انه كبار السن انه يياثر على حياتهم او هم بيون او
 82 افكر بالأيدي الز لكبار السن، اها، يعني كنت احسب انه بس أو الاي ادي الز كيف
 83 كبار السن يحتاجون وكيف اركز عليها. كنت افكر انه كنديشن، وعندي ديزينز،
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[توقف]
 [استحابة]
 تكرار ما كنت متأكد
 [نبرة كالتة]
 [نبرة كالتة]

→ not related to speciality (mean ot)
 → not covering the specialization
 → Samia when she went to hospital she realized total of specialist is diffuse
 → not know lots of things about OT specialist
 → not enough study about mental health
 → one subject was Psychology
 → feel not

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[استعادة] يقصد [تكرار] ما كان من قبل
 [تبريد] [تهدئة] [استعادة] [إبراز] [تبريد] [تهدئة] [استعادة] [إبراز] [تبريد] [تهدئة] [استعادة] [إبراز]

→ feel PBL preparation for practice
 → PBL helped in discussion
 → skills learned in PBL moved to hospital
 → PBL helped attend by discuss case with
 → PBL ↑ think about
 → PBL helped in working with team on one case

Do you feel PBL course has prepared you for practice?
 If yes:
 • Can you describe how?
 • What aspects were most useful?
 If no:
 • Why? what made this difficult? What was missing?
 أحسن ايه، لان لو ما كانت هذي المادتين موجوده، ماكان أشلون اقولك، ماكانا نقدر نتناقش على كيس واحد، حتى حنا الجين في الهوسبيتل عندنا زي الديسكشن، مثل لو اقولك بالانكولوجي كان ويكي وبيكي وبيتي، الميتينق، الميتينق هذا نقاش فيه الكيس هذه، ونناقش فيه الحالة نفسها، بمشاكلها كلها، فهي كاسيم لو انا ماجربتها في الجامعة ماكنت اقدر اسويها بالهوسبيتل، طيب، فانا حسيت انها افادتي بالنهاية، اني انا اقدر الجين دسكس ماي كيس، اقدر ناقش هذي الحالة، مع اشخاص كثير، او مثلا اتر دسبلتري خلاني حتى افكر كيف الاذرتيم ممكن ايه يشتغل بلبل الكيس نفس الكيس، مثلا لو اشتغل باس بي اجمع بي تي لو اشتغل مع انتر تيم، كنا نشغل على ون كيس، اهذي نفس الفكرة، بس بالهوسبيتل، طيب ايش أكثر شي ممكن فادك؟ ابي اشتغل وذ التيم، على ون كيس، اوكي طيب

[تبريد] [تهدئة] [استعادة] [إبراز] [تبريد] [تهدئة] [استعادة] [إبراز] [تبريد] [تهدئة] [استعادة] [إبراز]

PBL course influences on internship period.

→ Can you tell me about your experience when you first transitioned from being a student in University to being an OT intern?
 • How did you adapt yourself with the change?
 → knowing the place
 → place was familiar
 → samia was not able to try every thing
 → not use to applying it
 → when she come to real life she can't do it
 → fair from real life →
 → did not apply or try assessment
 → know it's correct or not
 → not do entry assessment
 → not did wrong in hospital because not do it or try alone
 → finding of discrepancy (self-reports)
 → plan to adapt with
 → knowledge to find in bairen aren
 → not enough knowledge at beginning

Can you tell me about your experience when you first transitioned from being a student in University to being an OT intern?
 • How did you adapt yourself with the change?
 احنا كنا بالنسبة لنا احنا ايه اول ما انتقلنا انا رحلت للمين هوسبيتل وزي ماقلتلك كان فاميلير، بس ماكنت اقدر اجرب كل شي، بلوش، لان احسن اني ماني متعوده اطيقة، حنا او كيه صح كان عندنا لايات وكنا نخبر فيها وكنت عارفه هاو تو ابلاي اسسمنت، بس لما نجي لريل لايف، لا ماقدر اسويه هذي ون بوينت، يعني ريل لايف فيه مشكلة؟ ايه فيه فير من الريل لايف اني اسوي اسسمنت مثلا وين ريل بيشتنت، النقطة الثانية اني انا ماجربتها او طبقت الاسسمنت كثير، اها، عشان اعرف اذا هو اكرت ولا لا، يعني ممكن الاسسمنت سويته تو ثري تايم بالاب، بعدين سويته باوسكي، بعدين خلاص ما عاود سويته اقين، يعني بالنسبة للام ام تي، لما اجي للهوسبيتل اكيه اني بغلط فيه، لان ماسويته كثير او ماكنت اطبق كثير، ممكن هذا غلط ماني انا اني ماكنت اراجع الأشياء اللي كنت اخذها، طيف كيف كنتي تحاولين تكيفين نفسك بالمتغيرات هذي في اول فترة انتقلتي، اول أسبوع أسبوعين؟ بالنسبة لي انا كان عندي زي البلان، بالبداية ما رحلت للبرين اري كان النولج جدا سعي ما كنت ايش اسوي ايدا من البداية، ايش الأشياء

[استعادة] [تبريد] [تهدئة] [استعادة] [إبراز] [تبريد] [تهدئة] [استعادة] [إبراز]

المفروض انا اعرفها بالبسيك، كان فيه فايل عن البرين، كنت ادرسه، كان في اليوم
 احي صباح اقرى ون ارتيكل مثلا، ايه، بالنسبة لتخصصنا، اصير اقرى ماقرى
 كثير بس اقرى ون ارتيكل كل يوم، انا بعدين الظهر اسوي من بداية اليوم اسوي
 براكتيكل على البيشنت، جيد، حتى لو غلط كنت اسويه، ليش لان البريستور
 موجود ويعدل لي. اها ممتاز. بس اسبوع اسبوعين حسيت انه كويس لما يروح
 البيشنت كنت اطبق معه، تتوقعين الفترة اخذ منك اسبوعين تقريبا او ثلاث
 اسابيع على ما بال...؟ ايه اسبوعين وحسيت انه كل شي فميليروكل شي صح،
 الاسمنت اللي ماكنت اعرفهم كنت اخلي انا اقول للبريستور اني ما اعرفهم بس انا
 بسويه وانتي قولي لي صح ولا غلط.

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→ knowing the basic on research
 → study burns files
 → reading articles
 → do practical even if it's wrong
 → preceptor change to my help
 → improving with time
 → felt familer after 2 weeks
 → preceptor helped with assignment
 → burn unit discussion
 → asking question and answer question
 → understand the case
 → reaching the case
 → knowing the position after it come
 → after 8 montes, when patient ask her she will answer
 → before when patient ask she take out preceptor
 → pbl ↑ confidence
 → pbl ↑ critical thinking
 → pbl improve the experience
 → feel in each area different
 → did not know at beginning
 → not know assist
 → not know how do the care
 → not know how do the undiagnose
 → not know about material of silica
 → not take burn pbl courses

Can you tell me more?
 In what way has PBL influenced your transition to internship?
 Do you think the skills and knowledge that you learnt in PBL course have influenced your practice? If so how? If not what was missing?
 What aspects were most useful?

ايه، حسيت احنا في اليرن كانت البريستور بعد كل كيس نشوفها تتناقش فيها سواء
 صحيح، تسألني انا سوال، تسأل الانترن الثانية معنا سوال ويصير نشوف ال ال
 ال هذي الكنديشن وتساألنا أسئلة ونجاوب عليها سواء، واصير اعرف انا الجواب
 الصحيح، فحسيت هذي الطريقة هي افضل طريقة خلتي استوعب الكيس
 نفسه، انا اقرى انا الكيس قبل تجينا، يعني اذا شفته بصير اخذ الكارت رفيو اصير
 عارفة من البيشنت اللي حاوية، عارف ايش البريفيس لفل حقا، عارفة ايش اللي
 تي رول حقا، اصير انا عارفة البيشنت حتي قبل لا يدخل علي، جيد، بعد
 ما يخلص السشن البريستور تسألني واجاوبها، فاحسيت هذي الطريقة هي انسب
 طريقة.

ايه، حسيت بس مع الوقت مو على طول، وذ تايم يعني، ايه، ممتاز
 طيب كيف اثرت المهارات والبنج هذي؟ حسيت الحين لو يسألني البيشنت
 سوال يكون قادرة اني اجاوبه اول الما يسألوني البيشنت كنت الف على البريستور
 ههه يعني زاد الثقة عندك في زاد الثقة، زاد الكريكتل فينكتق، ممتاز، اكسبيرينس
 مثلا.

حسيتي انه فيه اشياء مميزة او معينة من النلج او السكيلز ساعدتك في فترة
 الامتياز خاصة في فترتك الأولى هذي؟ احس في كل ايريا مختلف، مثلا انا مثلا
 في البرين ماكنت اعرف في البداية يعني ماكنت اعرف ايش الاسمنت اللي ممكن
 اسويها بالبرين على الابرين بيشنت مثلا، ماكنت اعرف مثلا انا انا بالبرين
 هوسبيل نسوي ون كير ماكنت اعرف ابدأ عن الون كير اولاً عن الباندجتق ولا عن
 الماتريل الموجودة حتى السليكون. ماكنتوا تاخذون عنها في الكورس حق البرين
 بيت ليرنينق؟ لا لا ما فيها مكان فيها انا.

الماحة في الومعة اللي تارسة
 كل مو في الومعة
 انا اعرف لغة او ما انا؟
 ما كنت انا ما اعرف؟
 ما كنت اعرف
 lack of knowledge and skills
 انا اعرف لغة البرين؟ فاقم
 ما كانوا يا هذو الومعة في الومعة
 بالبرين

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→ Samia was able to
ably knowing and skills that
learned in PBL courses
context

→ neuro and ortho courses
were not PBL

→ not found answer
in google

→ lack of apply skill
in hospital

→ fear of apply skill
learned in uni in hospital

→ fear of doing something
wrong

→ if PBL is important
course eg nursing
it could be more useful

→ if need courses for
burnout hand → work
sunny change for
B211111

→ course is unchangeable
→ some PBL courses not applicable
in SA

→ reading was really helped

→ search for intervention helped
up to date intervention

→ preceptor help by ...

→ explain or discuss with
with preceptors

→ get feedback

→ meeting or discussion
for case

→ discuss with preceptor for
different between cases

→ correct the knowledge
if it's right or not

• Can you describe how did you transfer it to hospital?

• What are the things that helped you?

• Are there any things that prevented transfer of what you learned in PBL course into hospital? How (describe)?

If no:

• What made this difficult?

طبيب يعني المهارات والنلج التي اخذتها في البريلم بيت ليرينق كنتي بإمكانك
أنك تطبقينهن لو تعلمتينا؟ به ايه ايه طيب اول فترة انتقالك للمستشفى فيه
شي لاحظتية من الكورس حق البريلم بيست ليرينق ماهينك فيه او كنتي
تتمنين يكون عندك اكثر كورسات في البريلم بيست ليرينق من الكورسات
الثانية؟ ايه مثلا بالمواد نفسها اللي كنا ناخذها اللي هي النبرو والاورثو هذي
المواد الأساسية اللي اشوفها مع كل البيشنت غالبا ماكان فيها برويلم بيست
ليرينق، حتى الكورسشن انا كنت ابحاث عنها في قوقل ماكنت الاقياها، اشياء
كثيرة بالسكلز ماكانا صح كنا نسويها بالاب بس زي ماقلت لك في الهوسبيتل
مانسويها، او فيه فير انا اسويها او اطبقها، أخاف انه اسوي شي غلط. لو كان فيه
بريلم بيست ليرينق هذي هذي الكورس المهمة مثلا نبرو اورثو صح ممكن انها
تفيد اكثر، ولو كان فيه عندنا أي كورس بالنسبة للبرين وكورس خاصة للهاند
برضوا اكيد بيتغير علينا للافضل، ايه، طيب فيه اشياء منعت نقل هذه
المهارات والنلج التي في البراكتيس للانترين شيب، يعني تحسين فيه اشياء...؟
انا احس انه هذي انا يعني انا كانها الكورس نفسه اخذوه وجو خطوه، حتى لو
ماكان ابلكيل، اها، فمممكن ابلكيل في اربا ثانية او فيه كنتري ثانية بس مهي هنا.

What are the things that have enabled you during internship period?

• Can you describe how?

• Is there any relationship among what you have learned in PBL course and the things that have enabled you during internship period?

ايه، انا اقرى كل يوم، ممتاز، انا اقرى كل يوم انا والانترفينشن اللي ابحاث عليه
بل بل مثلا الحين انا الاقي انترفنشن والبرسبتر حتى يقول انترفنشن بس ولا واحد
منا يعرف وش الاصح الا لما نشوف هل هو اخر ابدت انترفنشن وللا، كنت
ابحث عن الأخير، ولاخير هو الاصح، صحيح، فا فا الارتكلز اللي تواريخها جديده
تكون افضل. هل هذي الأشياء اللي ساعدت فترة الانتقال لك في الامتياز؟ ايه،
بالنسبة للبرسبتر، اذا كان يشرح لي او يناقشي، بالاشياء اللي اسويها صح او غلط،
يعطيني فيدباك هذا بعد الشيء يساعد كثير. جيد المييتيق او الدسكشن للكيس
او لكل الكيس مرة مفيد انه لما افرق بين كل كيس وكيس يصير عندي اشلون اهل
يعني معرفة اكثر لما اصير اناقش البرسبتر حتى في الدفرنسس مابين كيس وكيس،
يربط لي النولج، او يعدل لي البيانات اذا كانت صحيحة او غلط، انا حسيت انه
هذا الشيء فرق معي كثير، لما اناقش البرسبتر حتى على اختلاف الانترفينشن مع انا
اكثر من مريض، حتى لو كان ذا سيم كنديشن.

عاشق

وصية المنبر ليرينق
المواد الأساسية
ليست

PBL لوفية اكثر بيستفيدون
اكثر
لوفيه كورس خاصه
لبعين انا مع بيستفيدون اكثر
[نيره خطه]

[مذكرات تونسي]

!!

[مردود] [توضيح]

[مريض]
نا كورس اهل
المتن

→ hospital system helped 341
 → Preceptor allows to help with education 342
 → Practice self helped 343
 → been responsible 344
 → Confidence helped by been responsible 345
 346

ايش الأشياء الثانية التي تتوقعين انها ساعدت في فترة الامتياز؟ وهونت عليك فترة الانتقال من طالب الى طلب امتياز؟ انه مثلا انا مادري بس من هوسبيتل لهوسبيتل البرسيتر فيه احد يسمح لك انك تطبق، التطبيق نفسه يساعد يعني تمسك بيشتنت وتشتغل عليه صح يعني يوهاف يور اون بيشتنت الرسبونسبليتي صبي
 → لما احد يعطيك ايها غير عندك نظرتك لنفسك، يعني تكون كنفدنس اعلى تتوقعين؟ ايه انا حسيت انه انا الثقة عندي زادت لما مسكوني بيشتنت.

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What are the things that have challenged you during internship period?
 • Can you tell me more about that challenge?
 • How did you manage around those challenges?
 Is there any relationship between this challenging and what you have learned in PBL course?

أوقات لما يكون فيه اكثر من انتير مع برسيتر واحدا ما تحسن انه انا مو معطيككم احسن كلكم الاثنين، احسن هذا الشي انا احسن هذا الشي انا مدري، أوقات يقارن ما بين الاثنين مع ان كل واحد عنده مميزات، اهه، هذا الشي بعد غلط، انا، اوقات لما يكون فيه اكثر من انا من انتيرن ماسك ون كيس، كل واحد يعتمد على الثاني، اهه، هذا الشي التي لاحظته، مافيه ... ، بداية الفترة أوقات الدوام ما كانت زي الحين، والحين ترى احنا بعد وقفونا عشان كورونانا احسن لما يقطعوننا ويرجعونا احسن هذي بكرة كلها شلنج، صحيح، الكفيد هذا ... ، ايه، طيب فيه أشياء او تحديات واجهتك فترة الامتياز؟ زي ماقلتك انه بالنسبة للبرين للبرين اشياء كثير كورسس كثيرة ما عمرها مرت علي بيشتنت الهوسبيتل لقيتها، بعض الاسمنت ماتطبيق بالهوسبيتلنا انا احنا اخذناها، فيه اسمنت موجوده بالهوسبيتل انا ما عمرها مرت علي بالجامعة، انا، ايش بعد ...

طيب كيف حاولتي انك ادبتي يور سلف حول هذي...؟ بالنسبة لاشكاليات التولج كنت انا ابحث لنفسي يعني والاشياء التي ما عرفها احاول اسأل حتى لو انا البروسيتر مسؤول عني الحين، الاخ لما يكون فيه اكثر من انتيرن صرت أقول مثلا انا اصبر امسك هذي الكيس كاملة عشان اشوف البروقرس وانتي تمسكين الكيس الثانية احاول اوضح للبرسيتر هذي النقطة، لما مثلا بالنسبة للكوفيد طبعاً
 → مادري ... ما عرف اشلون انا بسيطر عليه،،،، ارجع مثل لما رجعنا اخر مرة اسأل البرسيتر حتى ايش صار على البيشتنت هذاك الي انا كنت اتابع معاه عشان انا اشوف على الأقل تكون عندي خلفية ايش صار ...

هل فيه شي او تحسبن فيه علاقة بين التحديات اللي واجهتك وبين الكورس اللي هو البريلم بيست ليرنق؟ احسن انا احسن انا التحديات موجودة لانه ماكان فيه بريلم بيست ليرنق الكورس كامل ماكانت موجودة او مطبقة، ولو كانت مطبقة احسن انها بيتحسن من نضرتنا ك... لو كانت مطبقة كامل الكورس مثل كلية الطب او كلية الصيدلة، الكورس كامل بريلم بيست ليرنق تتوقعين انه افضل لكم من ناحية الامتياز؟ افضل، من ناحية التطبيق، ايه بتسهل علينا كثير والمرحلة هذي الي جلسنا فيها فترة طويلة نحاول نعدل او نحاول مع هذي التحديات راح نقل، لانه اردي ماخذينها في الجامعة، لانه اردي عندنا خلفية عنها، لانه اردي احنا ديسكس الكيس، مو شي جديد علينا وما راح اخذ منا وقت أو تضيع علينا وقت كبير، ببصر يركز اكثر على البراكتيكل سكل، يركز اكثر

discrpite the chn cerce as wasting of time
 وصف ان PBL يحافظ على الوقت من اجله مع انه يهدر وقتنا وهدرنا

→ feel better if PBL course

was present (382) course
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كانت تكون موجودة.

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> Do you have any suggestions for university or internship place that might improve OT internship student experience?

→ suggest last 3 months in diary

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→ last 3 months was the best of teaching

→ last 3 months should be practice

→ ~ ~ ~ prepare student for internship

→ ~ ~ ~ review basic thing

→ ~ ~ ~ learn how to apply e.g. MMT, joint

→ ~ ~ ~ learn how to do group interview

→ ~ ~ ~ cover neuro and ortho

→ cover basic area of OT

→ cover practice last 3 months

→ low confidence

→ forget knowledge and skills

→ need to reduce student number

→ need more focus on inter student

→ need clear structure (instructions)

→ different precept (preceptives)

→ lack of evaluation criteria

→ Hospital is best place for intern student → good environment

→ work load on intern

→ lots of patient

احسن اخر ثري منت تكون مافيه نظري، احنا كنا ناخذ اخر ثلاث شهور
اشياء كثير نظري، اشياء كثيرة عن التشيخ، اشياء كثيرة تكون سوالب اكثر
من انها براكتيكل، احسن لو كانت اخر ثلاث شهور من اللل من اللل من
السنة، تكون تدريب او تهينة للطلبة نفسهم كيف يديرون بالنترنشيب
يرجعون يراجعون لهم الاشياء الاساسية، هاو تو ابلاي الاسيسمنت، كيف
تسوون الام ام تي، كيف تسون جون اسسمنت، كيف تسون مثلا قروب
انترفينشن، كيف تسون !!! يعني كل لو يناقشون او يغطون فيه اكثر سواء
كانت نيورو اورثو !!! مادري اذا يغطون الاريا الاساسية في العلاج الوظيفي، لو
يغطونها براكتيكل اخر ثلاث شهور بيروح الانترين للهوسبيتل وهو عنده
كنفيدنس اكثر. ماهو ناسيها من اول سنة اخذ الام ان تي ثم يرجع ياخذ،
يعني هذا كان عندك لو كنفيدنس بداية الامتياز؟ ايه، احنا اخذنا ام سي
اول امادة، فاستنتين، فلو اروح المستشفى بجي اطبقة بعد سنتين ماراح اعرفه،
صحيح،
لو طلبت منكم اقراحات في مكان الامتياز...؟ مكان الامتياز بالنسبة
احسن لو يقللون عدد الطلبة ويركزون اكثر على الموجودين،
ويصرون يحطون استركتشر واضح مثلا شكليست واضح، الاشياء المطلوبة
منهم واضحة، لان ابدا مانعرف ولا شي، كل واحد مع البرسيتر حقه
وطريقته كل برسيتر يختلف، واخر شهر او شهرين افالويشن % الافلويشن
حقك ماتعرف وش بيقيمونك عليه، احسن لو بصير الاستركتشر واضح
بيكون افضل، ويقللون عدد الطلبة ويركزون على الموجودين يكون
افضل. بس صراحة هي افضل مكان انه ابنة فيه
طلبة الامتياز، مافيه شي ممكن ازيد عليه لانه صراحة هم مغطين كل شي،
صح انهم يكرفون الطالب والشغل كثير والبيشن كثير بس من ناحية تدريس
او من ناحية تدريس هي الافضل. فيه شي ودك تضيقينه للمقابلة؟ لا

[تكرار، نبرة مارتية]

دليل انه منتم
نقطة يا التمة
نرم اول

قصه الاستركتشر

[تكرار]

Ending the interview

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Semi-Structured Interview transcript (participant 1)

English translated transcript to help transparency

Research question: What are the experiences of occupational therapy internship students' regarding the influences of Problem-Based learning when they move to practice in Saudi Arabia?

After greeting and greetings, thanks for participating and obtaining approval from the participant to begin the interview.

Interviewee's background

Pre-intern: occupational therapy education

In which university did you study for a qualification in OT? I studied at [redacted] University, [redacted]. **In Riyadh, Jeddah, or Eastern Province?** In Riyadh, excellent.

As you know, different universities offer different structures of the OT PBL course. Do you mind telling me how was your course delivered? For us, aaa, we have two years of preparatory years and two years of specialization. In these two years of specialization, mmm, we took all the subjects for occupational therapy, these subjects that we took, each subject has a different study system, there were subjects that required us aaa to have a lab and theoretical, **oh**, and some subjects no, they were theoretical subjects only. There were subjects that were practical only, the subjects that were practical only we used to take them in labs and they would ask us more assignment opposite of theoretical ones that were OCB, not only OCB, but we worked on them for theoretical presentation or assignment, that's it, aaa, and the final is examine. **Okay, as for the problem-based learning (BBL).** The problem-based learning, I am telling you I remember that we only took one subject, interdisciplinary. We took it in the seventh semester, I think. Yes, in the seventh term, the last year, the first term. This is the only subject.

How was PBL worked in your institution? What was the process? We had, how can I explain it, the preceptor would come and we had one topic, such as one case that we took for three weeks. **Good.** This case was something we were discussing, aaa, as if it were a story, and we were discussing the case. What were the right things, what were the wrong things from our point of view, what could help this case? what are the things that we did not pay attention to, such as care for the patient and the caregiver, **excellent.** We were discussing all of these things with this only one subject. We have a second subject, which is the group intervention, it was almost similar to it, but not the same aaa aaa teaching method. **The first subject was in the third or fourth year?** The first subject was in the fourth year, **and the second subject that you told me about?** The intervention group, let me check for you, was in the fourth year, but in the second semester. **You mean in the first term and this in the second term?** Yes. What was the method of the group intervention, it was like the interdisciplinary. We used to separate as group and, for example... we would see...aaa aaa. Do you know how it happened? **Yes, but each university is different from the other.** In group intervention, we all used to make intervention at self, so we would have, for example, disease, and every group would make its own group intervention. **Ah**, so we would discuss all the

basic topics from beginning to end, as if we were making intervention as a group, this was the only thing that was similar to the interdisciplinary. **Okay, excellent, at the end of the intervention, will there be a specific solution that you achieved?** Yes, **excellent**. For example, each group had a specific disease, we used to do group intervention, we would take the case and what problems there were, we would make it like assignment, the intervention was there, then, after every little while, the preceptor would evaluate whether it was correct or not, and give us the feedback. **Good Excellent Excellent, this was all in the fourth year?** It was all in the fourth year.

What topics did you covered in PBL course? Was it different from other courses?

How? Oh, a minute, you mean the actual topics of the interdisciplinary, **yes, yes**, okay a minute, I don't remember well, but let me open the notes for you, **it's not a problem, just if you remember the cases, were they Stroke, or Nero....** The cases were talking about, aaa, they were three weeks story about an elderly woman who had had had Alzheimer's. How did they diagnose her and what problems did she face?, mm aaa it was talking about aaa how her life was before and how after the disease, after she was treated or after she received, aaa, the intervention, how was the caregiver with her, how did the education delivered?, what the things that have changed for her, and how we should focus on psychology aspects. These are the things that they taught us. **Okay, excellent, the second subject you took was about the group intervention?** The group intervention we took prison. **Oh**, we took this once, the rest was like assignment for us, intervention aaa, a little bit was on Arthritis. They gave us a condition and said, oh you will make the group intervention. Mostly, it was on the geriatric, for elderly people. **Aha, good. Was there a preceptor in the second subject that took and help you?** Yes, yes, yes.

What skills did you learn from PBL course? Sometimes, sometimes I mean, before taking these courses, my view was a little limited, it is a condition... intervention... Okay, aa I wasn't focusing on family whether it affected them or not? I was not focusing on the education or how important the education was at all... I was never thinking about doing a group intervention. I was not, I was not thinking that if more than one person gathered in one intervention would benefit someone, I felt that it was the opposite. **Do you expect these skills that you acquired in these two courses?** yes, yes, and I was not thinking aaa that the elderly people might affect their lives, or they want, or I was thinking about ADLs of the elderly people, **aha**, I mean I was thinking that I should just focus on aaa ADLs, how the elderly still need me to focus on them. I was thinking that it was a condition, and I have disease, how do I treat the disease? I was not thinking about other aspects until after these modules. I mean, there are things in it that I didn't notice before. **Ok, excellent, excellent.**

What was it like being a PBL students? In wat ways have changed you as a person? I didn't know, I didn't know.

Clarification of internship experience to date

How long have you been working as intern student? Eh, now eight months, I completed 8 months.

Which settings were you in? What did you do? Can you describe your experience in those settings? But I covered it in two hospitals. First, I was in main hospital, I was in brain two months, and ortho one month. **Excellent.** [REDACTED]

[REDACTED] excellent, I spent five months there, **where are you now?** No, I went back to main hospital again. This year became difficult because of Covid, but I went and then came back.

How was your experience on the internship during these 8 months? In the beginning, I took in brain. Frankly, I did not know anything at all about brain except to mention the two years of specialization in which we were taken one lecture not a module, so I had no experience or background about brain. I sat for two months, and I feel that until now I have not covered it properly, **which means you feel gap?** Regarding the university and this major, there is big gap. I mean, when I went, I only knew that.... aaa, the degrees of burns just, so aa it is very bad that I left the university and had no experience with the Brain. I feel that the Brain is a little close to the hand.

From which side? When we were working on the hand, the intervention that we used we did it with brain cases in relation to the hand, as in hand angry. I feel that the knowledge that I had in the brain was from the hand, and it was not from the knowledge that the brain at self or regarding this specialization.

Is there a difference in the sitting or do you think they are similar? Okay, yes, very, very, I tried, I don't know whether to say it or not, but I tried two places, and they were all excellent for the internship aaa practice, **it's excellent**, but every hospital is different, the structure is different, **the policy?** Yes, the structure itself is different for the internship, how can I tell you, umm, it depends on interns itself whether they develop themselves or not. **correct.** I mean, it depends on you as a person, whether you are developing yourself in this place or not. It is true that there is someone who supervises you, but still you will not find all of this knowledge unless you search for it. This how I found it in adult care. As for [REDACTED] no, they had two lectures per week, mandatory you attend even if you had a patient. Aaa these lectures covered aaa a lot of things that we asked as interns, I mean topics that we chose, which we know we have a deficiency in it, I mean, they weren't from their point of view, from the intern's point of view. And the second thing, aaa, there was aaa a clear structure from the beginning. From our arrival, they gave us the requirements for the first month you are supposed to finish these aaa things, the paper for the first month, as checklist. So, when you enter, you know that you have a checklist you have to finish all this concepts by the end of the first month for example. By the end of the second month, you must be finishing another checklist, by the end or rotation, you have to finish the third checklist. It was a general checklist and basic, and it had a long one at one time, and even had all the assignment how I can explain it, by the end of six month, the complete rotation you have done all the assignment found in most of the areas. **Excellent.** So aaa from the beginning you entered, you knew what your schedule was, and what was your plan.

Ok, regarding the areas that you covered in the internship, is there a difference between them? Yes, there was difference, it is a big difference. I covered palliative oncology, patient was acute. While the outpatient is difference, and rehab was different. Rehab patient will be in rehab hospital and intensive, and I see them twice a day, I see them once in the morning and once in the afternoon, so it becomes as if I follow them more, unlike the acute, the acute I only see them 20 minutes, and I see them once or

twice a week. **Aha good.** There was a difference, outpatient I saw them, for example, twice or once every two weeks, and it was different every time. In terms of your following the progress it differs, in terms of your work with them is differs, your intervention change since the time will change.

As an internship student, how manage yourself with those similarities and differences? I feel that aaa, when I became involved in [REDACTED], I felt that I was a little lost. Did you start in [REDACTED] I started at Main Hospital, but I wasn't lost. I knew the environment, I knew the people, I knew the hospital, and I knew everything in it, I mean, I knew most of them. **Did you have experiences before in it?** Yes, the way aaa we used to work in the Main Hospital familiar more than [REDACTED], when I went there no the work was.... It is true that the first week the preceptor was right above your head, but from the second week the preceptor would be there and the work entirely on you, meaning their expectations was very high. The expectation was so high that I felt myself as therapist if I was absent the patents for the day no one would cover for me. **AHA.** I have to find someone. **Most of the cases were on you?** No, they didn't leave me. No, the preceptor was there, I wouldn't do anything without the preceptor. I mean, it was there, but even if it was there, the whole work would be on you. I felt that my skills were better there, I felt that even my method with the patient was better, the communication became better, and the problem solving was better. **Did this come with the experience or with time?** With time, no with time, with time, according to the preceptors. There are preceptors who would like to let you do it, there is a preceptor who even if he knows that you could do it, will tell you no, I will do it you follow me. It differs from one preceptor to another. But I felt that in [REDACTED] it honed my skills more. **Excellent.**

Interview central questions:

The influences of PBL course for OT students' (during university time)

Was PBL course meaningful for you? If so how? If not why? Yes. **Can you describe it to me?** Okay, as for the first subject, which is interdisciplinary well, this subject was lecture read only in class, we would read a file with a story, for example, if I told you the first story we took geriatric we diagnose Alzheimer's. We would see how the function, the previous level of function, how it affected her, and how she received the intervention. What were the problems that happened to her, the complications in the hospital after she went home, and what were the problems for her family. This is all we discussed. Okay, we read the case together. There was a paper with questions, these questions as in a group we solve them together and then we discuss them with the preceptor. **Can I ask you how many students there were in one group?** Approximately 6 to 7. excellent. The intervention group was more, approximately 8 to 10, and then with assignment, we became less, 4-5 girls, **beautiful, excellent.** **Do you think that problem-based learning is beneficial for you?** Yes, **what's the way?** When the questions were what was in every lecture, we used to take them, for example, for the interdisciplinary there were questions, these questions combine between the lines, meaning things that are not clear. My answer was different from someone else's answer. My view was different from someone else's view. Aa it was just that it was giving me a new idea, everyone says from their point of view, then I have a complete expansion of this case. Of course, the theory becomes limited to my point of view only.

Ah good and excellent. So, how do you expect the problem-based learning benefit you as a person, or rather as an internship student? Maybe it made me listen aaa to many sides, or take many opinions, aaa or it made me aaa understand the case itself, trying to understand aaa the basic problem and what was it, I know what things caused it, the problem what cause, what harmed me in any way, and I search for all these areas, I see a difference aspect for patient itself.

Do you feel that the university prepared you to practice? aaa, I feel like it's not enough. **Excellent.** I mean is it possible. **I'm not talking about the university, about the OT programme itself?** The programme itself I felt it give me the basic, **excellent,** and the rest is up to you. You search and see what has become new. Like I told you, there are many missing things, for example, we have not taken enough about the hand, meaning the hand itself, we have not taken enough about the brain. Aa I have never aa taken about palliative or oncology, **oh,** I never studied about oncology, I mean all of these medical terms I remember all of them from preparatory school, **oh,** we never studied about it, aaa, I remember that it was limited to neuro, and to ortho, and ortho was never deep, aa, most of the subjects that were there were teaching, and things that you feel hmmm I mean there is not a lot of the same specialty. For example, there are subject itself, on... teaching, and on.... I mean it is not it is not the correct coverage of the specialty. I mean, when I went to the hospital, I knew that our specialty is diverse. Our specialty includes many things that I do not know about, **true.** Our specialty aa I mean has something I never knew about. I mean, even mental, mental health which we didn't study much about. One subject we took was psychiatry. **Ah,** I don't feel it covered all the specialties, the specialties we currently have in hospitals.

Do you feel PBL course has prepared you for practice? I feel yes, because if aaa if these two subjects had not been present, it would aa not have been, how can I tell you, we would not have been able to discuss a single case. For example, now in the hospital we have something like a dissection, like if I tell you in oncology, in oncology was weekly aaa weekly meeting, this meeting is where we discuss this case, and we discuss the case itself, with all its problems, it is same. If I had not tried it in university, I would not have been able to do it in the hospital. **Ok,** I felt that it benefited me in the end, that I can now discuss my case, I can aaa discuss this case with many people or for example, interdisciplinary made me think about how the other team could work aa on the same case. For example, if work just with PT or works with another team, we all work on one case. I feel this is the same idea, but in the hospital. **Ok, what can be of most help to you?** I work with the team, on one case, **okay.**

PBL course influences on internship period.

Can you tell me about your experience when you first transitioned from being a student in university to being an OT intern? What was it like for us yes when we first moved, I went to the Main Hospital, and as I told you, it was familiar, but I couldn't try everything, why, because I feel like I'm not used to applying, okay it's true we had labs and we were exam in them, and I knew how to apply assessment, but when we come to real live, I can't do it, this one point. **Does real live a problem?** Yes, there is fare from real life, I make assessment for example with real patient there was a fare. The second point aaa is that I did not try it aaa or apply assessment much, **ah,** in order to

know if it is acuity or not. I mean maybe the assessment I did it two three times in lab, then I did it with Pasuki, then I didn't do it again for sure. I mean for MMT, when I come to the hospital, I am definitely making a mistake in it, because I did not do it a lot or did not apply much, perhaps this is a mistake on my part because I did not review the things I was taking.

How were you trying to adapt yourself to these changes during the first period you moved, the first two weeks? As for me I had a plan aaa in the beginning when I went to the brain aria, the knowledge was very bad, so I was what to do starting from the beginning, what are the things I am supposed to know in basic, there was a file about the brain and I used to study it. One day I would come in the morning to read one article, for example. **Ah**, for our specialty, I don't read a lot, but I read one article every day. aaa, then in the afternoon, from the beginning of the day I do practical on the patient. **It's good**, even if I make a mistake I do it, because the preceptor is there and corrects it for me. **That's excellent**. But for a week or two, I felt that it was good when the patient left I used to practice with him. **Do you expect the period to take you approximately two weeks or three weeks, perhaps...?** yes, two weeks, and I felt that everything was familiar, and everything was right, the assessment that I didn't know, I was letting aaa tell the preceptor that I didn't know them but I'm doing it right and you tell me right or wrong.

In what way has PBL influenced your transition to internship? Can you tell me more? I felt that when we were in the burn, the preceptor after every case we would see her and discuss it together. **True**, she would ask me a question, would ask the second intern with us a question, and we would see aa aa aa all of this condition, and she would ask us questions and we would answer them together, and I would know the correct answer, so I felt that this was the method the best way that allowed me to understand the case itself. I read aaa the case before it come to us, meaning if I see it I get the card review, I know who the patient is coming, I know what the previous level for her, I know what the PT roll is for her, I will know what the patient before they enters me, **good**, after the session is over preceptor asks me and I answered her, I felt that this was the most appropriate method.

Do you think the skills and knowledge that you learnt in PBL course have influenced your practice? If so how? If not what was missing? Yes, I felt, but with time not directly, **with time do you mean**, yes, **excellent**. **So, how did these skills and knowledge affect you?** I felt now if the patient asked me a question, I would be able to answer it. I mean, the first first time if patient asked me, I was a turn on the preceptor. **Hhh this means it increased your confidence?** yes increased my confidence, increases critical thinking, **excellent**, experience for example. **Do you feel that there are special or specific from knowledge or skills that helped you during the internship period, especially in this first period?** I feel that it is different in every area. For example, aaaa, me for example in brain I did not know at first, I mean I did not know what assessment I could use in brain on brain patient for example, aaa I did not know for example aaa, we in main hospital we do one care, I did not know at all about one care, **aha**, not about the bandaging, nor about the materials that exist even

silicon. **Didn't you take it from the course of problem-based learning?** No, no, it was never there.

Were you able to apply the skills and knowledge that you have learned in PBL course into hospital/ practice context? Yes, yes yes. **Can you describe how did you transfer it to hospital? What are the things that helped you?** For example, with the same subject that we were taking, which are neuro and ortho, these are the basic subject that I often see with every patient. There was no problem-based learning, even the questions. Some of the questions I was searching for on Google and I could not find them aaa and many things with skills that we were not correct in we were just doing them on labs, as I told you, we don't do it in the hospital, or there is a fair when I do it or implement it, I'm afraid I'll do something wrong. If there was a problem-based learning for these important courses, for example neuro and ortho, it might be more beneficial. If we had any courses for the brain and special courses for the hand, it would certainly change us for the better. **Ah, well are their things that prevented the transfer of these skills and knowledge in practice to the internship, meaning that things could be improved...?** I feel that this is it aaa I mean aaa it's like the same course they took and put it on, even if it wasn't in applicable, **oh**, it might be applicable in other area or in another country, but it's not here.

What are the things that have enabled you during internship period? Can you describe how? Is there any relationship among what you have learned in PBL course and the things that have enabled you during internship period? Yes, I read every day, **excellent**, I read every day aaa and the intervention that I search for in in for example now I find intervention and the preceptor say the intervention, but none of us know what is correct until we see whether it is the last one update intervention or not. I was searching for the last, and the last is the most correct, **true**, so so the articles with new dates are better. **Are these things that helped you during the transition period in the internship?** Yes, for the preceptors, if he explains to me or discusses with me the things I do right or wrong, gives me feedback this helps a lot. **good**. Aaa the meeting and dissection for case or for all cases its very useful when I differentiate between each case and another I have how can I say it aaa, I will have more information, meaning I will know more when I discuss my preceptor regarding the difference between case and case, connect the knowledge for me, or amend the knowledge for me if it is correct or wrong, I felt that this thing made a lot of difference to me, when I discuss with my preceptor regarding the difference in intervention with aaa more than one patient, even if it was in the same condition. **What other things do you think helped during the internship period, and the transition period from student to internship application ease for you?** I for example, I don't know, but from hospital to hospital the preceptor someone allows you to apply it, the application itself helps, meaning that you hold the patient and operate it correctly, I mean, you have to have your own patient responsibility. This when someone gives it to you, it changes your view of yourself. **It means that you have higher confidence.** Yes, I felt that aaa my confidence increased when I have my own patient.

What are the things that have challenged you during internship period? Can you tell me more about that challenge? Sometimes when there is more than one intern with one preceptor aa you don't feel aaa that you are not given your right to both of you. I feel this thing aaa I feel this thing aaa I don't know. Sometimes they compare the two even though each one has advantages. **Oh**, this thing is still wrong. Ahhhh, and there are times when there is more than aaa one intern responsible for one case, each one depends on the other. **Ah**, this is the thing that I noticed, **there is no...**, at the beginning of the period, the working hours were not the same as now, and now you see we are still suspended because of Corona. I feel that when they stop us off and bring us back, I feel that this is all a challenge, **right, this is the covid...**, yes, **are there more things or challenges that you faced during the internship period?** As I told you in brain there are many things many courses that I have never seen before, when I came to the hospital, I found it. Some of the assessment was not applied to the hospital as we took it. Aaa there is assessment available in the hospital that I had never seen before at the university, ahh, what's next....

How did you manage yourself around those challenges? Regarding the problems of knowledge, I used to search for myself, meaning I tried to ask about the things I didn't know, even if the preceptor was not responsible for me now. Oh, when there is more than one internet, I started saying for example that I started holding this whole case to see the progress while and you held the second case. Aaa I tried to explain to the preceptor this point, for example with regard to Covid of course, I don't know... I don't know how I can control it. I go back, like when we came back the last time, to ask the preceptor what happened to this patient who I was following up with so that I can at least see what happened.

Is there any relationship between this challenging and what you have learned in PBL course? I feel aaa, I feel aaa, that the challenges are there because there was no problem-based learning for the entire course, it would not have been present or implemented, and if it were implemented, I feel that it would improve our view as interns. **If it were implemented for the entire course, such as the College of Medicine or the College of Pharmacy, the full course for the problem-based learning would you expect to be better for you in terms of internship?** Better, **in terms of application**, yes yes yes it makes it much easier for us, and this stage in which we sat for a long time trying to adjust or try with these challenges will decrease, because already we take it in university, because already we have a background in it, because already we have discussed the case. It is not new to us, and it will not take us any time or waste a lot of time, it seems that we will focus more on the practical skills and focus more on the questions. I don't know if we were not paying attention to this before. I feel that it would be better if it existed.

Do you have any suggestions for university or internship place that might improve OT internship student experience? I feel like the last last three months should be nothing theoretical. We have been taking the last three months to do a lot of theoretical things, a lot of things about teaching, a lot of things that are negative more than practical. I feel like the last three months of aaa from aaa of the year were training or preparation for the students themselves, how to manage in internship, they go back and review the basic things for them, how to apply assessment, how to do MMT, how to do

joint assessment, how to do for example the group intervention, how to do aaa I mean everything if they discuss it or cover it more, whether it is neuro or ortho aaa I don't know if they cover the basic area in occupational therapy. If they cover it practically in the last three months, the intern go to the hospital and they have more confidence. They did not forget about it since the first year he took MMT and then took it again. **Do you mean you had low confidence at the beginning of the internship?** Yes, we took MMC in the first semester, first subject, for two years. If I go to the hospital and come to apply after two years, I will not know how, **right**

If I ask you for any suggestions for internship areas...? The place of internship for the [REDACTED] is that they would reduce the number of students and focus more on those present, and insist on putting a clear outline, for example, a clear checklist, the things required of them are clear, because we never know anything, everyone has his own preceptor and method for every preceptor is different, and the last month or two there ia an evaluation. You have the right to not even know what they are evaluating you for. I feel that if the outline was clear at the beginning with the [REDACTED] it would be better, and if they reduced the number of students and focused on those present it would be better. But [REDACTED], frankly, is the best place because aa environment with intern students. There is nothing I can add to it because frankly they cover everything. It is true that they put a lot on students, and the work is a lot and the patient is a lot, but in terms of teaching or in terms of training, it is the best. **Is there anything you would like to add to the interview?** No.

Ending the interview

