CRITICAL THINKING AND CLINICAL REASONING IN NEW GRADUATE

OCCUPATIONAL THERAPISTS: A PHENOMENOLOGICAL STUDY.

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A thesis submitted in partial fulfilment of the requirements of the
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Abstract

Critical thinking and clinical reasoning in new graduate occupational therapists:

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The aim of this study was to examine, understand and conceptualise the critical thinking and clinical reasoning adopted by new graduate occupational therapists as they enter the workforce to become newly autonomous practitioners. The study obtained the perspectives of new graduates, their supervisors and service managers on the means by which critical thinking and clinical reasoning develop to meet the expectations of employers. Factors which impeded the transition between new graduate and autonomous practitioner were identified and explored.

Ethical approval was obtained to conduct the study. The study adopted a qualitative phenomenological research approach; Interpretative Phenomenological Analysis (IPA), which informed framing, data gathering and analysis. Semi-structured interviews were conducted with new graduates (n=6), supervisors (n=7) and managers (n=7) from multiple sites within one National Health Service Board. Interviews were transcribed verbatim from audio-recordings.

The findings indicate that new graduates are expected to develop critical thinking and clinical reasoning in a manner that might challenge traditional conceptualisations of the transitioning process. A phenomenon, historically named the "shock of practice", was reflected on by therapists in each phase of the study and adaptive and mal-adaptive responses to this in the thinking and behaviour of new graduates was identified. The clinical supervisor-supervisee relationship appeared to be the key source of support, and the supervisor the most significant knowledge resource, for new graduates. This relationship was supplemented by both peer support and Preceptorship. Discharge planning was a significant source of anxiety and development of an algorithm to support this process is proposed. Recommendations for further research and theoretical implications for practice and undergraduate education are discussed.

Key words: New graduate, critical thinking, clinical reasoning, transitioning, supervision, occupational therapy, phenomenology.

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Finally, I dedicate this thesis to my parents, Marza and Alan Robertson; to my family, Eilidh, Catriona, Gillian and Mhairi, and especially to Ali. Thank you for taking this walk with me.

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Chapter 1: Background and Introduction

"I always get the feeling that when people come out of college; at that point it's almost make or break isn't it?"

63 Betty, a Band 7 occupational therapist and study participant.

1.1: The Thesis

This thesis is submitted in partial fulfilment of the requirements of The Robert Gordon University for the degree of Doctor of Philosophy. It is traditionally structured, comprising a background and introduction chapter which provides the context for the study followed by a chapter which examines key pieces of literature, knowledge and theories regarding applied thinking and reasoning, particularly within health and social care contexts and the occupational therapy profession. Chapter three details and examines the justification for the methodology adopted for the underpinning research study and methods adopted in data collection. The fourth chapter is structured around the three phases of the study, each section describing and evaluating the analysis of the findings from one phase. Throughout these chapters the reflexion undertaken by the author during data gathering and analysis is ingrained in the account. Chapter five summarises the findings from the study and relates these to the original aim in the context of existing literature thereby elucidating the theory and understandings derived from the study. The thesis concludes with chapter six which draws on the discussion within chapter five to summarise the findings of the study and propose a number of recommendations.

The research study which underpins the thesis was undertaken by the author part-time, over a six-year period, with the major data collection period being spring 2010 to summer 2011. The semi-structured interviews employed in the study aimed to capture the experience and

perceptions of new graduate occupational therapists making the transition into practice. Based on the findings from the first phase of interviews it became evident that the perceptions, expectations and understandings of firstly, clinical supervisors and secondarily, professional managers was important to capture as the relationships of the new graduates with these two groups appeared to facilitate and predicate successful transitioning. In each part of the thesis the major theme of the study, the development of critical thinking and clinical reasoning in new graduate occupational therapists, is emphasized.

1.2: Chapter Overview

This chapter will outline the scope and context of the study, initially by briefly examining contemporary definitions, practices and controversies within the allied health profession of occupational therapy. It will go on to discuss current ideas about critical thinking and how this underpins professional practice, in particular, the thinking undertaken by therapists in practice, which is commonly called clinical reasoning. It will demonstrate the value and timeliness of an inquiry into the thinking and reasoning undertaken by new graduate therapists, the development of their thinking and reasoning capabilities and barriers to development. The chapter will conclude by summarising the rationale for and development of the study aim and the structure of the study.

1.3: Occupational Therapy

Occupational therapy is an allied health profession (AHP), one of fifteen health professions regulated by the Health Professions Council (HPC) (Health Professions Council 2012). Numerous definitions of what occupational therapy is and what occupational therapy does are in existence and are constantly being modelled, remodelled and revised. There is no widely accepted single

definition of occupational therapy; indeed the most recent publication by the U.K. College of Occupational Therapists (COT) (College of Occupational Therapists 2009a) to consider this issue contained no fewer than 14 separate definitions of occupational therapy. While this is useful for occupational therapists, given the multiple contexts within which they are employed, it could be seen as an issue when attempting to succinctly conceptualise the profession for the benefit of others (Wilding and Whiteford 2007). The establishment of a unifying theoretical foundation has been impeded and hampered by the lack of a robust evidence base and research culture within the profession. It has been demonstrated (Bennett et al 2003, Forsyth, Summerfield-Mann and Kielhofner 2005, Quick, Forsyth and Melton 2007), that, in common with some other healthcare professions, (Urbach and Baxter 2005, Iles and Davidson 2006), occupational therapy has been slow to both generate and implement research based evidence. There are multiple reasons for this including limited access to research funding; the complexity, and resultant difficulty in conducting valid research, within much occupational therapy practice; until recent years, a relatively weakly developed professional research culture and low research skills base within the profession.

While difficult to define, some authors have attempted to encapsulate the core skills of the occupational therapist. There remain reservations regarding some of these attempts, particularly due to their context dependent nature, as discussed below.   In the UK, the College of Occupational Therapists (2009a p.1) states that "occupational therapy enables people to achieve health, well being and life satisfaction through participation in occupation". Occupation in this instance is viewed as "daily activities that reflect cultural values, provide structure to living and meaning to individuals; these activities meet human needs for self care, enjoyment and participation in society". Core skills, shared by all occupational therapists irrespective of context, include; collaboration with the client, assessment, enablement, problem solving, using activity as a therapeutic tool, groupwork and environmental adaptation (College of Occupational Therapists

2009a). It could be argued that these core skills, perhaps excluding the use of activity as a therapeutic tool, are not entirely unique to occupational therapy.

Like other AHPs and health professions, occupational therapy has adapted in terms of its philosophy, core skills, practices and scope over time and in response to local demands so that some of these parameters may differ fairly dramatically in discrete social and geographic areas. For example, if one thinks of the difference between practice and philosophy in the affluent, exclusive, private U.S. healthcare system and the remaining bulk of the U.S. healthcare system or between the U.S. and Gaza, (Lavin 2011) or the transition countries in Eastern Europe (van Bruggen 2011). Commendable efforts to establish commonality in, for example, occupational therapy terminology and education in the countries of the European Union are ongoing (Creek 2010). Within the profession there is an emerging awareness of embedded Westernised values and memes which tend to exclude the incorporation of understandings drawn from non-westernised or marginalised cultures and individuals (Hammell 2010). There have been initiatives to address this perception. For example, in the past decade, changes in occupational therapy educational standards have reflected a move to embed appreciation of diversity and cultural competence within occupational therapy graduates. It is against this somewhat difficult to define, complex, changing, developing background that this study has been conducted.

1.4: Complexity

In 2003 the COT commissioned a research study which aimed to find a unifying definition of OT for research in the U.K. (Creek 2003). The definition proposed by Creek and endorsed by COT was that "*occupational therapy can be described as a complex intervention because it is in concord with the definition laid down by the Medical Research Council (MRC 2000, p1). That is, occupational therapy comprises 'a number of separate elements which seem essential to the proper functioning of the intervention although the "active ingredient" of the intervention that is effective is difficult to specify.'*" (Creek 2003 p.14). This definition has attracted criticism from

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both within (Duncan, Paley and Gail 2007) and from without (Lambert, Harrison and Watson 2007), the profession and it is perhaps questionable whether occupational therapy would meet the criteria for definition as a complex intervention using the updated MRC guidelines published in 2008, (MRC 2008). Criticism from within the profession has, in part, centred on the argument that, although some of what an occupational therapist undertakes would meet the MRC (2000) criteria for consideration as a complex intervention and occupational therapy itself may be incorporated with therapies provided by other health professions to comprise a complex intervention, not all of occupational therapy practice can be considered as complex (Duncan, Paley and Gail 2007). Criticism of Creek's definition from out with the profession has highlighted the apparent meaninglessness of a healthcare profession defining itself as a complex intervention when this could be true of a number of health professions (Lambert, Harrison and Watson 2007). However, Creek's (Creek 2003, Creek et al 2005) papers, in concert with the MRC guidance (2000, 2008) and other evidence has proved to be influential in promoting the concept of complexity within the profession, the recognition that the practice of occupational therapy includes complex interventions and that occupational therapy itself can be integrated into complex interventions (Creek 2009). The emerging recognition of complexity in the provision of healthcare and the preparation of new graduates to operate in situations of complexity is explored further in chapter 2 below.

1.5: Critical Thinking

Building on the work of the MRC other authors have highlighted that practice within situations of complexity, such as healthcare, requires the development of a different way of thinking (Plsek and Wilson 2001) where knowledge and skills can be applied flexibly in unpredictable, changing and uncertain contexts, what has been called capability (Fraser and Greenhalgh 2001). Capability involves the ability to "*solve problems—to appraise the situation as a whole, prioritise issues, and*

then integrate and make sense of many different sources of data to arrive at a solution. Problem solving in a complex environment therefore involves cognitive processes similar to creative behaviour" (Fraser and Greenhalgh 2001 p.801). The recognition of the development of capability as a characteristic desirable in professionals operating in situations of complexity was derived from the work of educators and others during the preceding years (Stephenson and Weil 1992, Barnett 1994). Concurrent with this conceptualisation of capability was recognition of the desire of employers, organisations and educators to engender critical and metacritical thinking skills in graduates and employees, skills which would enhance the human resources of the employer or organisation. Critique or critical thinking *"takes on the attributes of this capability that we have been discussing: it is practical, multiperspectival, consensual and dialogical in character. It is intended to enable us together to handle our situations better – better, that is, in every sense: with sensitivity to others, a sense of the conflicting values present in a situation, an aesthetic appreciation, a concern for the environment and to see these situations in new ways. Critique is not simply critical, but is constructive and is organised to develop solutions, or at least imaginative possibilities, for discussion. Critique is intended to move everything – purposes, situations and persons – forward"* (Barnett 1994 p.185). A number of authors (Christensen et al 2008, Higgs et al 2004) support this focus on the development of capability in AHPs as preparation for practice in complex healthcare environments. In a Scottish pedagogical paper, McKendree et al (2002) highlight renewed interest in critical thinking at the turn of the millennium as a response to the development of electronic information networks, rapid and complex changes in society and a resultant demand for flexibility at individual and organisational levels.

More recently, The Cochrane Public Health Group (Hall et al 2010 p.582) has suggested that in situations of complexity, evidence informed practitioners require the ability to engage in critical thinking. This might include *"identifying the questions to be resolved, collecting relevant evidence, and assessing, synthesizing and distilling evidence in a way that can inform the set of activities to*

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be undertaken as a result". As further discussed in chapter 2 below, there remains controversy in conceptualisations of critical thinking regarding its role, nature and definition (Reeves 1996, Aveyard, Sharp and Woolliams 2011). Definitions may range from the traditional concept of Socratic skills type linking of logic to thought to emerging definitions which view critical thinking as an attitude, disposition or set of reflective or evaluative thought processes. Jones-Devitt and Smith (2007) make a distinction between "*mathematical notions of reasoning and exercises in numerical analysis, psychological theories of thought processing and developmental learning alongside 'heavy' philosophical theorising about the nature of thinking per se*" (Jones-Devitt and Smith 2007 p.xiv) and applied critical thinking undertaken by practitioners within health and social care contexts, although they do acknowledge the necessity of adopting a blurred boundary position in some instances and the multiplicity of synonyms for critical thinking in the literature. It is clear that, like occupational therapy, there is no general consensus on what constitutes critical thinking. This thesis is concerned primarily with the applied critical thinking that new graduate occupational therapists undertake in healthcare contexts, however it is evident that much can and should be learned from advancements in cognitive psychology.

1.6: Clinical Reasoning

Clinical reasoning is a term that has become associated with the thinking and decision making processes undertaken by allied health professionals in practice. Multiple models and definitions of clinical reasoning exist and a number of these are explored in chapter 2, below. In the AHP literature the term may be used synonymously with terms such as "*professional reasoning*" (Turpin and Iwama 2011 p.33), "*occupational reasoning*" (Rogers 2010 p.57) and "*clinical judgement*" (Alfaro-LeFevre 2009 p.99). Leading authorities and researchers in the field of clinical reasoning, physiotherapists Joy Higgs and Mark Jones, describe clinical reasoning as a complex phenomenon and recognise that "*there is no single model of clinical reasoning that*

adequately represents what clinical reasoning is in the context of different professions and different workplaces" (Higgs and Jones 2008 p.5), have proposed that "*clinical reasoning (or practice decision making) is a context-dependent way of thinking and decision making in professional practice to guide practice actions. It involves the construction of narratives to make sense of the multiple factors and interests pertaining to the current reasoning task. It occurs within a set of problem spaces informed by the practitioner's unique frames of reference, workplace context and practice models, as well as by the patient's or client's contexts. It utilises core dimensions of practice knowledge, reasoning and metacognition and draws on these capacities in others. Decision making within clinical reasoning occurs at micro, macro and meta levels and may be individually or collaboratively conducted. It involves metaskills of critical conversations, knowledge generation, practice model authenticity and reflexivity*". This comprehensive definition echoes many of the themes of other contemporary definitions of clinical reasoning (Turpin and Iwama 2011, Rogers 2010, Unsworth 2011a).

In examining the literature on clinical reasoning in occupational therapy it quickly becomes evident that, with rare exceptions (Harries and Duncan 2009), conceptualisations of clinical reasoning within the profession have not kept pace with research developments outside the profession, particularly understandings of thinking and reasoning drawn from research in cognitive psychology and understandings of reasoning drawn from psychological studies underpinning the development of artificial intelligence. Many of the professional understandings of thinking and reasoning are based on a research study sponsored by the American Occupational Therapy Foundation in the early 1990s (Mattingly and Fleming 1994). For example, if one examines a recent well regarded foundation level occupational therapy textbook (Curtin, Molineux and Supyk-Mellson 2010) the chapter on, in this case, occupational reasoning, (Rogers 2010) contains 22 references, 1 from the 1960s, 3 from the 1970s, 8 from the 1980s, 3 from the 1990s and only one reference from later than 2005 (from nursing). None of the post 1990 references relate to research studies. A similar criticism could be levelled at the chapter on

clinical reasoning in occupational therapy (Chapparo and Ranka 2008) in one of the most widely read books on clinical reasoning for health professionals (Higgs et al 2008), a chapter which draws very heavily on the work of Mattingly and Fleming and their heirs. While not wishing to dismiss this work entirely, a number of reservations about the currency, the cultural context and assumptions underpinning the work can be raised, for example, as identified above, the US healthcare system is almost unique in its culture and practices, yet this is where the underpinning research was conducted, prior to 1992. As conceptualisations of thinking and reasoning current in 1992 can now be challenged so too should conceptualisations of clinical reasoning built on outdated and culturally isolated understandings be reviewed. These ideas about the reconceptualisation of clinical reasoning in the light of current understandings are explored further in chapter 2 below.

1.7: New Graduates and The Shock of Practice

It may be seen from the earlier sections of this chapter that the context of this study is complex; that key underlying concepts are perhaps somewhat ill-defined and may be contested, for example, the terms occupational therapy, critical thinking, clinical reasoning and professionalism may all meet Collier, Hidalgo and Maciuceanu's (2006) criteria for consideration as essentially contested concepts. However, the reality is that new graduates are entering occupational therapy practice, a potentially complex situation (White 2007, Banks et al 2011, Robertson 2012c). A key factor in succeeding in situations of complexity is thought to be a disposition to critical thinking, or the adoption of a critical stance, and critical thinking itself or selected constituents of critical thinking may in part underpin the interactions of new graduates with their patients and within the context of their practice. Conceptualisations of the reasoning processes underpinning face to face interactions with patients, commonly called clinical reasoning, have not kept pace with research grounded developments in the conceptualisation of reasoning or

developments in the conceptualisation of how people think in practice (Evans 2010, Harries 2007). Assumptions based on work undertaken within the profession over 20 years ago permeate the professional literature on thinking and reasoning. Professional "knowledge" regarding thinking and reasoning is not research based but frequently based on the theorising of eminent occupational therapists (and friends of the profession) (Hammell 2010). Occupational therapy is not unique within the allied health professions in this respect. The experience of new graduates in transitioning from student to practitioner is one worthy of study as it is known that new graduates make mistakes, for example, Health and Safety Executive (HSE) statistics demonstrate that young workers are as likely to have an accident in the first six months at a workplace as during the whole of the rest of their working life (HSE 2011). While few studies have investigated this issue in occupational therapy, new graduates in the medical and nursing professions have been extensively studied. This research has demonstrated a small but statistically significant increase in mortality in UK hospitals as new medical school graduates take up employment and that new junior doctors make mistakes in 8% of hospital prescriptions, (General Medical Council 2009). From the junior doctors' perspective, studies have shown that almost a quarter say they are regularly forced to cope with situations beyond their clinical competence or experience and that they may feel "thrown in at the deep end". These studies have not been replicated in occupational therapy but over a period of years similar perceptions to those of junior doctors have been reported anecdotally (Barnitt and Salmond 2000). In the nursing profession it is recognised that the experience of transitioning from student to new practitioner is one of the most stressful times in a nurse's career and that there is a high turnover of new graduate nurses. The term "*reality shock*" was coined by Kramer (1974, cited in Duchscher 2008) whose research suggested that nursing students were inadequately prepared to make sense out of, or subsequently be acculturated into, the behaviours and expectations of their new professional working culture. While Kramer's research predates contemporary understandings of practice in situations of complexity, there is a considerable body of

contemporary international research that supports her findings (Maben and Clark 1998, Duchscher 2008). Within occupational therapy in the UK, Mary Morley has examined the experiences of new graduates in some detail and funded by COT has developed a programme of Preceptorship for new graduate occupational therapists (Morley 2005, 2006a, 2006b, 2006c, 2007a, 2007b, 2009a, 2009b and Morley, Rugg, and Drew 2007). Of particular concern was the (Morley, Rugg and Drew 2007) finding that suggested that due to developments in working practices, new graduates were increasingly lone working and that the amount of time new graduates spent working alongside senior colleagues was limited and may be reducing. This research took place in London and only in mental health settings so may not be generalisable but if accurate raises questions about modelling, feedback and the development of clinical reasoning in new graduates which is known to be developed and enhanced by effective professional supervision (Morley, Rugg and Drew 2007).

1.8: The Study

In part this study extended a research study that built towards the author's Masters level study, which suggested that there were significant differences in the styles of clinical reasoning adopted by undergraduates when comparing occupational therapy students educated in the United States and students educated in the United Kingdom when presented with the same video and paper case history material (Robertson and Dasari 2005). As mentioned above, studies examining clinical reasoning in graduate occupational therapists have predominantly originated in the United States. A concurrent factor was the involvement of this author in the early stages of piloting Morley's (2007b, 2009a) Preceptorship programme in a local health board. The third factor prompting this study was observations of and conversations with new graduate therapists and occupational therapy managers which led the author to question the preparedness, in particular capability in situations of complexity, of new graduates entering practice.

The central research aim was therefore to examine and attempt to understand and conceptualise the critical thinking and clinical reasoning that occupational therapy graduates employ as newly autonomous practitioners in situations of complexity, the means by which these develop to meet the expectations of employers and any barriers to their development, from the perspectives of the new graduate, clinical specialist / supervisor and manager.

The study was undertaken in three phases as detailed in chapter 3 below and adopted a qualitative, interpretative phenomenological approach to research. The phases of the study were synonymous with the three grades of staff under consideration, new graduate, clinical specialist / supervisor and professional lead / manager, and partially overlapped. Understandings developed from each participant interview informed subsequent interviews and phases.

Chapter 2: Literature Review

2.1: Introduction

The aim of this literature review is to contextualise the study by discussion of pertinent literature. As outlined above, the broad aim of the study was to gain understanding of the critical thinking and clinical reasoning that new graduates employ as newly autonomous practitioners in situations of complexity. The literature review is structured around this aim, firstly looking briefly at complexity in practice, going on to look at critical thinking and clinical reasoning and finally examining selected literature, drawn from occupational therapy and other sources, concerning the experience of transitioning into practice.

The author has periodically undertaken literature searches throughout the process of proposing, conducting and writing up the study. Literature searches have been conducted through the use of relevant electronic search engines, examination of reference lists in published research papers and books and archive searches of governmental and non-governmental organisations. Further relevant literature has been kindly signposted by peer members of online discussion forums, by the supervisory team and by private communication with subject experts. The breadth of the literature searches permitted the author to gain understandings from professions out with occupational therapy; however occupational therapy journals were consistently reviewed for relevant papers. The search strategy, terms and key dates are summarised in Appendix 1.

The literature searches encompassed only resources published in English. While acknowledging this as a limitation, the author has been able to consider the work of occupational therapy authors such as Gilsenan, Hopkirk and Emery-Whittington (2012), the team of authors contributing to Occupational Therapy Without Borders (Kronenberg, Pollard and Sakellariou 2011) and selected occupational science literature (for example Kantartzis and Molineux 2011) as

well as relevant literature from out with the profession (for example Manktelow 2012). From analysis of this literature it could be concluded that it would be very possible to make unwarranted assumptions in translating understandings of terms like occupation, reasoning and thinking into non-Western or non-Anglophone contexts (Kantartzis and Molineux 2011). Even within the journals published in English there was not infrequent evidence of unwarranted assumptions when authors were writing about cultures other than their own. For example, Ward (2003), an American author writing in the American Journal of Occupational Therapy, in a paper that examines clinical reasoning in one community mental health specialist, critiques the work of Munroe (1996), conducted in Scotland, with what are identified as community occupational therapists, and makes a number of incorrect assumptions about the nature of the therapy, the likely client group and therapists' role. This is only understandable if it is appreciated that there was and is no equivalent to Local Authority provision of occupational therapy in the United States and the role adopted by community occupational therapists employed by Local Authorities would be completely unfamiliar to Ward (2003). In contrast, few therapists working in the UK would truly appreciate the centrality of reimbursement to healthcare in the United States and the impact that reimbursement issues have on the practice of occupational therapy, including clinical reasoning, in that system.

The reason for highlighting the importance of understanding the geo-socio-political context, from which literature has been drawn, is that much of the occupational therapy literature on clinical reasoning is either published in the United States or draws on a few key studies conducted in the United States. It remains questionable whether understandings gained from the study of the thinking and reasoning of therapists who have grown to adulthood, qualified and developed as occupational therapists within the U.S. can unthinkingly be used to, for example, interpret the thinking and reasoning of therapists employed in the U.K. National Health Service. Looking outside the occupational therapy literature there is considerable evidence that cultural norms, assumptions, life experience and cognitive biases perhaps have a much greater influence on

reasoning and decision making than has until recently been recognised within the broader occupational therapy literature. There are of course exceptions to this generalisation, for example, the work of Harries (Harries and Harries 2001a, Harries and Harries 2001b, Harries and Gilhooly 2011) has consistently recognised the limitations in contemporary accounts of clinical reasoning, in particular the derivation of understandings from research studies which fail to represent the totality of thinking processes. More recently, occupational therapy authors such as Robertson (2012b) and Chaffey, Unsworth and Fossey (2010) have highlighted an increasing interest in the influence of the unconscious mind on thinking and reasoning. The importance attached to the geo-socio-political aspect of the literature included in this outline of the quality of the existing literature perhaps reflects the life and professional experience of the author who worked as an occupational therapist in the United States for a number of years; has co-authored research papers examining clinical reasoning with U.S. based peers; administers a student exchange programme with a university in the United States and has developed, co-ordinated and conducted a joint problem-based teaching and learning programme for occupational therapy students with peer educators based in a U.S. university for a number of years.

Any generic critique of the literature on reasoning and thinking would also have to highlight that the vast bulk of the literature is qualitative in character. The very nature of the topic inevitably lends itself to studies employing qualitative methodologies and the fallacy of attempting to adopt quantitative research methodologies in the study of, in their instance; clinical reasoning, has been convincingly demonstrated by Harries and Harries (2001a). However, this does mean that the hierarchical methods of evaluating the quality of evidence currently in vogue with, for example, The Cochrane Collaboration (2011) or The Scottish Intercollegiate Guidelines Network (2012) would rate studies of thinking and reasoning fairly low on their evaluations of evidence. This has led to the situation where a search of the Cochrane Library would reveal no reviews of clinical reasoning even though clinical reasoning and/or decision making will have underpinned the vast majority of the interventions chosen for Cochrane review.

Hammell (2009, 2011) building on the work of Mocellin (1995, 1996) has highlighted the reliance of the occupational therapy profession on shared assumptions, which are taken for granted as truths, and on which much of the profession's foundations and theories are constructed. These assumptions have been aggregated from the opinions of leading occupational therapists and rarely exposed to critical scrutiny. Mocellin (1995) went further, arguing that the generation and promotion of specific theoretical models has sheltered many core assumptions from critical scrutiny. It is probably fair to say that Mocellin justifiably and understandably had early iterations of the Model of Human Occupation (Kielhofner 1985) in his sights at that time and in his earlier writings (Mocellin 1992a, 1992b) but in the occupational therapy literature pertaining to thinking and reasoning there is evidence to reinforce the viewpoints of both Mocellin and Hammell. For example, it could be argued that the value attached to reflection in the education and professional development of therapists is disproportionate. In fairness, this question could be posed not only in relation to the occupational therapy literature but the literature of other health professions as well (Boud 2010). Reflection, the reflective practitioner, reflection in action and reflection on action are terms synonymous with the work of the American philosopher, educator and author, Donald Schön (1983, 1987). While recognising the value of critical self-reflection as one of the components of critical thinking, it could be suggested that the emphasis placed upon the generation of reflective occupational therapy practitioners has, until relatively recently, inhibited the development of other forms of criticality within the profession. From out with the profession, Barnett (1997 p.137), a Professor of Higher Education and Dean of Professional Development at the University of London has argued that Schön presents a *"truncated view of professionalism",* over-focused on the professional-client interaction, lacking, for example, an ethical strand, an openness to the ideas of others and the aspect of engagement in public life inherent in professionalism. Mann, Gordon and MacLeod (2009), in a systematic review, which primarily examined research evidence regarding reflection and reflective practice in the education of health professionals, also evaluated the literature as it pertained to qualified

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health professionals. The authors concluded that evidence supporting the promotion of activities intended to develop reflective capacities in health professionals remained theoretical and although observational studies, intuition and anecdote supported the theory, there remained questions over what strategies and practices were effective. Critical self-reflection is considered further below and in chapter 5.

Schön's (1983, 1987) influence on the conceptualisation of thinking and reasoning within the occupational therapy profession is also evident as a consultant in the development of what has come to be seen as the keystone study (Mattingly and Fleming 1994) into clinical reasoning in occupational therapy, conducted on behalf of the American Occupational Therapy Foundation (AOTF) and The American Occupational Therapy Association (AOTA) by Cheryl Mattingly, a social anthropologist (and Donald Schön's graduate student), and Maureen Fleming an occupational therapy educator. Schön's influence on the conceptualisation of this study and its underpinning assumptions was explicitly acknowledged in Mattingly and Gillette's (1991) paper describing the study's methodology.

To draw together the points made above it is worthwhile considering this study by Mattingly, Fleming and others which was conducted in the late 1980s on behalf of the AOTA and the AOTF; later published in book form as Clinical Reasoning: Forms of Enquiry in a Therapeutic Practice (Mattingly and Fleming 1994). This is a key study in the development of the occupational therapy profession's understanding of clinical reasoning and the influence of the study within the international occupational therapy clinical reasoning literature remains pervasive. There are a number of reasons for the AOTA/AOTF study to be so well regarded. It was one of the first studies into clinical reasoning within the profession. It was a well funded, longitudinal study and lent credibility by the early involvement of highly respected figures within the profession in the United States, such as Gary Kielhofner, Joan Rogers and Charles Christiansen, as well as the consultancy of Donald Schön (Mattingly and Fleming 1994). It could be suggested that, due to

the way the study was funded, occupational therapists within the United Stated would have an emotional as well as financial investment in the outcome of the study.

However, if the methodology and context of the original study are considered it may be possible to recognise some of the issues identified above. Schön himself trained as a philosopher in the tradition of Dewey and the American pragmatists, indeed his doctoral thesis was on an aspect of Dewey's work. The authors / researchers were based in prestigious private research universities in Boston; Mattingly and Schön at Massachusetts Institute of Technology (MIT) and Fleming at Tufts. The study itself was conducted in one large hospital in Boston and initially had 4 participants, all senior occupational therapists, later a further 5 senior therapists, who worked in the same medical centre joined the study and in the latter stages a further 5 therapists, described as junior therapists, volunteered to participate (Mattingly and Gillette 1991). It is not clear from the literature whether these 5 therapists were new graduates or simply junior to the original 9 experienced therapists. The methodology adopted in the study was, depending upon viewpoint, and incorporating current standards in qualitative research methodology; unique, pioneering or mixed methods. It is described by the authors as an ethnographic study, a choice possibly reflecting Mattingly's background in social anthropology, which became a participatory quasi-action research study with the increasing collaboration of the participants who were encouraged to reflect on their own practice (Mattingly and Gillette 1991). Within the accounts of the study it is also possible to identify a strong phenomenological strand. Mattingly (1994 p.66) retrospectively pinpointed this, identifying *"case examples in the phenomenological mode"* but stating that *"the term phenomenology is a recent addition to the language of occupational therapy"* (1994 p.68). This is quite possibly true given that in the mid-late 1980s there was a very limited research culture within the occupational therapy profession and something of a pre-occupation with what was seen as the scientific method, i.e. quantitative research, or it could be a limitation in the understanding of the occupational therapy students who initially *"interpreted"* occupational therapy for Mattingly (Mattingly and Fleming 1994 p.x). Certainly Mattingly's

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conception of clinical reasoning as *"applied phenomenology"* (1991 p.983) would suggest a pre-existing appreciation of the philosophy or research methodology on her part.

There are numerous methodological aspects of the study that might lead the reader to objectively question the validity of the findings. Most significantly, the potential for both researcher and participant response bias was evident. In addition to the authors, occupational therapy students acted as researchers and were assisting with the research as part of their undergraduate or post-graduate qualifications. The authors describe the excitement within the New England occupational therapy community generated by their study (Mattingly and Fleming 1994). It could be seen that the involvement of the professional body, prestigious professional authority figures, group dynamics, peer group pressure etc. might lead to a positive response bias in the participants, particularly those entering the study at a later stage. Some evidence for this suggestion is found in Mattingly and Gillette's (1991 p.976) assertion that *"We on the research team found the Clinical Reasoning Study to be the most rewarding study that any of us had ever undertaken, and this is due almost entirely to the intense interest that the therapists under study evinced in examining how they worked with clients ... Certainly, neither Donald Schön nor the first author (Mattingly), who have done action research studies with other professional groups, had ever seen this level of commitment"*. Culture and context specific assumptions on the part of therapists, patients and researchers are evident in the small pieces of transcripts of the interviews.

There is no wish on the part of the author to denigrate the work of Mattingly and Fleming (1994), or the work of Schön, indeed a number of the understandings gained from their work assisted the author in developing, analysing and discussing the findings in this study. It is simply that their work demonstrates how a relatively small, methodologically novel; culturally, geographically and contextually localised and potentially biased study can have a perhaps disproportionate influence on theory within the occupational therapy profession. For example, a recent book from New

Zealand (Robertson 2012) on clinical reasoning in occupational therapy makes reference to the Mattingly and Fleming study AOTA/AOTF at least once in all but three of its chapters, twenty five years after the study was conducted. Because Mattingly and Fleming's study was well funded, had the authority and investment of the AOTA/AOTF as well as the emotional and financial investment of the AOTA membership; because it was supported by authoritative figures within the profession and because it was conducted at a time when there was a limited research culture within the profession it would be difficult to question or critically test out their theories. It is also possible to see how findings from such a study might be transposed into contexts entirely different from the original study in the absence of an evidence base within the new context.

It could also be said that Mattingly, Fleming and their collaborators should be applauded for their relatively early recognition of the importance of studying the thinking and reasoning of therapists. Understanding the thinking and reasoning of therapists is of critical importance to the profession, most importantly in facilitating the enhancement of therapists' interactions with clients and patients but also in developing professional consultants, mentors, supervisors or preceptors; promoting collaboration with peer health and social care professionals or, as envisaged by Barnett (1997) above, engagement in public discourse. Developing confident articulate decision makers and leaders is one aspect of this enterprise but attending to the sub-conscious, tacit, embodied, intuitive processes in professional thinking and reasoning is also of immense value, if only to highlight potential sources of cognitive bias, question unwarranted assumptions, improve cultural competence and address discrimination.

Within the research literature, the terms novice (e.g. Dreyfus and Dreyfus 1980, Benner 1982, Unsworth 2001); newly qualified practitioner (e.g. Duchscher 2008, Banks et al 2011); new graduate practitioner (e.g. Doherty, Stagnitti and Schoo 2009) and newly qualified therapist (e.g. Ryan 2001) are used synonymously. However, on examination of this literature, it quickly becomes evident that researchers employ a wide variety of participant inclusion criteria within

their studies in order to investigate similar phenomena. This aspect of the literature is examined in detail below and criteria are suggested for future studies. The author has chosen to use the term new graduate occupational therapist to describe the participants in the phase one of the study below, in the belief that this term best describes the participants. This reflects the fact that many new graduate occupational therapists are not school leavers and may have extensive life and professional experience prior to entry to their occupational therapy course. For example participants in the study identified past careers in nursing, psychology and teaching. However all phase 1 participants had graduated as occupational therapists within the two years prior to entering the study. Other authors' and study participants' original terminology is retained when discussing their work.

This then is the background to the literature review below. It is structured to reflect the aim of the study. It encompasses literature mainly from the occupational therapy profession but draws on key theorists from out with the profession. It is recognised that there are limitations in both the quantity and quality of the evidence presented in the occupational therapy literature on thinking and reasoning, complexity and transitioning to practice, particularly if one adopts the quality criteria of the evidence based practice proponents. However, as Donald Schön (1987 p.4) wrote *"the problems of real world practice do not present themselves to practitioners as well formed structures"* and the fact that these are complex and multifaceted constructs does not render them any less worthy of investigation.

2.2: Occupational therapy practice, complexity and supercomplexity.

Nationally and internationally the language of complexity has entered the occupational therapy literature. Crepeau, Boyt-Schell and Cohn (2009), eminent North American authors, view contemporary occupational therapy practice as a complex process while the equally eminent European author, Creek (2003), has described occupational therapy as a complex intervention. Interest in complexity within the profession can probably be traced back to Kielhofner's (1978)

championing of general systems theory, from which both complex systems theory and chaos theory have grown, and to the Medical Research Council's (2000) definition and description of what comprises a complex intervention. However, as Duncan (2011) and Bannigan (2007) have identified, there is much ambiguity in the use of the term, which may either be used in a lay sense, as it very frequently is in the literature, or in a less frequently, but sometimes misapplied, systems theory sense. Bannigan (2007) went on to suggest that as the theory of complexity is so new it is very difficult to define.   Duncan, Paley and Gail (2007) questioned whether all occupational therapy interventions are complex interventions and Lambert, Harrison and Watson (2007) added to the debate by suggesting the profession engage vigorously with the challenge of complexity to assist in demonstrating the effectiveness of interventions while acknowledging the variability of practice. From out with the profession, Barnett (2000) has introduced the concept of supercomplexity, which has been picked up by authors in, for example, education (Hussey and Smith 2010) and nursing (Leyshon 2002). Barnett's (2000 p.6) account of supercomplexity in some ways encapsulates the experience of the transitioning occupational therapy graduate when he says *"professional life is increasingly becoming a matter not just of handling overwhelming data and theories within a given frame of reference (a situation of complexity) but also a matter of handling multiple frames of understanding, of action and of self-identity. The fundamental frameworks by which we might understand the world are multiplying and are often in conflict. Of the multiplication of frameworks, there shall be no end".* Barnett (2000) illustrates this point with reference to the experience of a junior doctor but could equally as well have used a nurse or an occupational therapist. This conceptualisation assisted the author in structuring his own thinking in that, as Barnett (2000) illustrates with reference to his fictitious physician, the participants in the study would undoubtedly be operating and attempting to operate not only in situations of complexity but handling multiple frames of understanding both generated by theorists and by knowledge that comes through engagement in practice i.e. supercomplexity. In comparison with the fictitious physician the situation for the new graduate occupational therapist is compounded

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by inconsistencies in theory, for example, lack of agreement on what constitutes a "frame of reference", and a less than comprehensive evidence base as well as potential challenges to professional identity.

Complexity, in its lay usage, is thought to have increased in contemporary practice due primarily to change and the demands that adaptation to change places upon the therapist. Change impacting upon the profession may come from demographic, social, cultural, political, technological, or epidemiological sources. Of particular influence are developments in the delivery of health and social care and changes in the expectations of patients and other stakeholders. As identified in chapter 1 it is thought that in uncertain and complex or supercomplex (Barnett 2000) situations, such as those outlined, that the ability to engage in critical thinking is essential for effective practice.

2.3: Critical Thinking

"Critical thinking is a defining concept of the Western university and a core concept of higher education" (Barnett 1997 p.7). Fisher and Scriven (1997 p.21) view critical thinking as an *"academic competency akin to reading and writing and of similar fundamental importance"* Fisher (2001) and Forshaw (2012) trace the history of critical thinking back to Socrates but identify John Dewey (Dewey 1909 cited in Forshaw 2012) as the father of the modern critical thinking tradition. Fisher (2001) goes on to demonstrate how contemporary conceptualisations of critical thinking have developed over the past century and lists some of the fundamental critical thinking skills as he sees them (table 1). While Fisher and Forshaw are probably correct in identifying Dewey as the key philosopher in the development of contemporary notions of critical thinking, it could be suggested that their view of critical thinking is somewhat narrowed and Western-centric. For example Barnett (1997) highlights the danger of reductionist challenges to

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critical thinking such as the belief that there is a single set of actions, skills, propensities or dispositions that can be labelled "critical thinking" and has a considerably more emancipatory vision for critical thinking, perhaps more in line with the Brazilian pedagogical philosopher Paulo Friere (1995) although this is not explicitly acknowledged in Barnett's writing.

Table 1: Some fundamental critical thinking skills (Fisher 2001 p.8)

To: Identify the elements in a reasoned case, especially reasons and arguments;

Identify and evaluate assumptions;

Clarify and interpret expressions and ideas;

Judge the acceptability, especially the credibility of claims;

Evaluate arguments of different kinds;

Analyse, evaluate and make decisions;

Draw inferences;

Produce arguments.

Barnett (1997) identifies that different disciplines, communities and professions may have their own forms of critical thinking and undoubtedly the forms of critical thinking adopted by health professionals, for example, would be superficially different from the critical thinking undertaken by professionals in the legal system. Within the critical thinking literature it is possible to identify a body of work that concerns itself with, or limits itself to, the development of a set of critical thinking skills and views deployment of these skills as evidence of critical thinking. Examples would be the publications by Cottrell (2005), Fisher (2001) and Moore and Parker (2007). While critical thinking skills such as those listed in table 1 (Fisher 2001) are undeniably useful to professionals they would exclude engagement in a critique of the wider context and critical

cultural engagement; they encompass what Barnett (1997 p.4) characterises as *"a very benign form of critical thought".*

Jones-Devitt and Smith (2007) identify an increasing interest in critical thinking within the health and social care literature since the early 1980s and correlate this with the changing nature of socio-economic and information infrastructures. Associated with these changes Jones-Devitt and Smith (2007) suggest that, in recent years, health and social care has become more complex in response to demographic changes, technological advancement, changing expectations and needs. They go on to say that the ability to engage in critical thinking is essential in order for healthcare professionals to be able to operate effectively in the rapidly changing, complex context of modern health and social care.

While this literature review is focused primarily on occupational therapy graduates, incorporating understandings gained from other healthcare professions, it should be recognised that concerns about opportunities for critical thinking and incorporation of evidence into practice are not unique to health and social care. For example, a recent study supported by the Royal Society for the Arts (Rowson and Lindley 2012) examined the experience of police officers and demonstrated a great deal of commonality with the experience of participants in the study described below in terms of cultural barriers to evidenced practice, the challenges of pressured decision making and adaptation, and the applicability of a number of the recommendations.

The arguments of Jones-Devitt and Smith (2007), Fisher (2001) and Barnett (1997), that the ability to employ critical thinking is a desirable attribute of graduates and an outcome of graduate level education and that the ability to engage in critical thinking is essential to professional practice in situations of complexity such as contemporary healthcare are supported by many authorities. Universities, such as Aberdeen (University of Aberdeen 2012), Glasgow (University of Glasgow 2012) and Cambridge (University of Cambridge 2012) list a capacity to engage in critical thinking as one of their desired graduate attributes. Occupational therapy

programmes within universities nationally (for example Cardiff University 2012, Brunel University, London 2012), and internationally (for example Association of Canadian Occupational Therapy Regulatory Organizations 2011, Lederer 2007) list critical thinking as a topic of study or a capacity to engage in critical thinking as an essential occupational therapy graduate attribute. The Health Professions Council (HPC), the regulatory body for occupational therapists in the UK, identifies autonomous and reflective thinking, critical reflection, critical review and other attributes and skills associated with critical thinking in its Standards of Proficiency: Occupational Therapists, (HPC 2007), and Standards of Education and Training (HPC 2009) documentation. Support for Jones-Devitt and Smith's (2007) view that practice in complex health and social care settings is enhanced by the capacity of practitioners to engage in critical thinking comes from both without (Wilkinson 2007, Fraser and Greenhalgh 2001) and within (Creek and Lawson-Porter 2007, Bannigan and Moores 2009) the occupational therapy profession.

Barnett (1997 p.86) conceptualised critical thinking as a stance i.e. *"an orientation towards the world on the part of the individual ... implying a sense of the world, but also of standing apart from it and of taking up a view of it that is not given entirely by the world itself".* Barnett (1997) identified that in order for an individual to be considered a critical person; three forms of criticality would be integrated within their being. These three forms of criticality or domains of critical thinking were critical self reflection; broadly concerned with a critique of the internal world or oneself, critical reason; broadly concerned with a critique of ideas, theories, propositions and knowledge and thirdly critical action; broadly critique centred on emancipation and action within the world. Barnett (1997) used a Venn diagram (figure 1) and a matrix (table 2) to demonstrate the integration, levels, domains and forms of critical being and these are reproduced below.

There is a body of published work within the occupational therapy literature that concerns itself with each of Barnett's (1997) domains of critical thinking. Through the influence of Schön on the

development of the profession, discussed within the introduction above, reflection and reflective practice are strongly espoused and embedded in practice. Critical reason has become increasingly important to the profession as firstly evidence based practice and more recently evidence informed practice have demanded that occupational therapists maintain the ability to critique the knowledge and ideas of, or generated by, others. With regard to critical action, in the lower levels one could identify an analogy with clinical reasoning while when examining higher levels one could perhaps see that occupational therapy's engagement with health improvement, health promotion, public policy or, more specific to the profession, occupational justice, (Wilcock and Townsend 2009) would require engagement in Barnett's (1997) higher levels of critical action.

Table 2: *Levels, domains and forms of critical being (Barnett 1997 p.103 table 8.1)*

	Domains		
Levels of criticality	*Knowledge*	*Self*	*World*
4. Transformatory critique	Knowledge critique	Reconstruction of self	Critique-in-action (collective reconstruction of world)
3. Refashioning of traditions	Critical thought (malleable traditions of thought)	Development of self within traditions	Mutual understanding and development of traditions
2. Reflexivity	Critical thinking (reflection on one's understanding)	Self-reflection (reflection on one's own projects)	Reflective practice (metacompetence, adaptability, flexibility)
1. Critical skills	Discipline-specific critical thinking skills	Self-monitoring to given standards and norms.	Problem-solving (means-end instrumentalism)
Forms of criticality	*Critical reason*	*Critical self-reflection*	*Critical action*

Figure 1: *Critical being as the integration of the three forms of criticality (Barnett 1997 p.105 fig.8.1)*
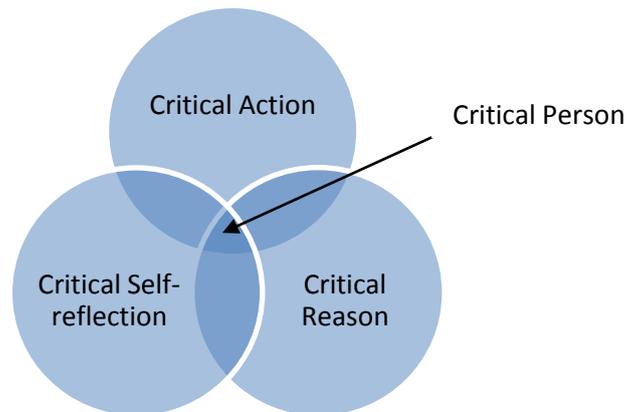
An adaptation of figure 1 was employed in the study described in Chapter 3 below to stimulate discussion around critical thinking in participant interviews. Other authors such as Ennis (1987, 2000) have attempted to conceptualise critical thinking. However these conceptualisations tend to be unwieldy, for example Ennis' (1987, 2000) taxonomy comprises 15 abilities and 3 dispositions, or focused on cognitive skills, such as Fisher's (2001) list above, which tend to ignore the higher levels of critical thinking. Barnett's (1997) model and matrix have been used to inform pedagogical research and practice in a number of fields (Jones 2005, Dehler, Welsh and Lewis 2001).

Understandably, given its high profile as a graduate attribute and professional characteristic, many authors have discussed critical thinking within the occupational therapy literature. Numerous research studies have been undertaken into isolated components of critical thinking such as critical self-reflection (for example Hallin and Svidén 1995, Morley, Smith and Petty 2011) and critical reason (for example Bennett et al 2003, Glegg and Holsti 2010). If the proposition that clinical reasoning is in some ways analogous with critical action is accepted, it can be seen from the chapter introduction above that there has been a longstanding interest in that form of criticality within the profession.

Relatively few authors have investigated critical thinking or integration of the forms of criticality. Bannigan and Moores (2009) developed a model of professional thinking incorporating reflective practice and evidence based practice. They viewed these thinking skills as forming a part of clinical reasoning rather than integrating with clinical reasoning. It is somewhat unclear from their paper how they conceptualise clinical reasoning as fitting in to this model. They initially state that clinical reasoning is closely aligned to professional thinking but then go on to say that they will use the term professional thinking preference to clinical reasoning. A paragraph later they list the components of professional thinking as *"a combination of deliberation, rational thinking, <u>clinical reasoning</u>, professional knowing and expertise gained from previous knowledge"* (Bannigan and Moores 2009 p.343). They then go back to suggest that, in establishing the validity of their model, researchers should employ methodologies employed for studying clinical reasoning. The other question that might be posed of Bannigan and Moores (2009) model is that it perhaps fails to fully acknowledge the value of intuitive, heuristic, automatic System 1 thinking (Kahneman 2011, Evans and Frankish 2009, Evans 2010). Despite these questions Bannigan and Moores (2009) should be applauded for recognising the value in integrating these components of, what they term, professional thinking rather than compartmentalising each. While they struggle to situate clinical reasoning within their model they do partially support Barnett's (1997) contention that integration of the forms of criticality is essential in the critical being.

Another example of a study that investigates the integration of forms of criticality would be that by Kristensen, Borg and Hounsgard (2012) which examined occupational therapists' (n=25) reasoning when integrating research evidence into the treatment of people who had experienced a stroke. This study used a phenomenological hermeneutical qualitative methodology and a participatory action research approach and its impressive sophistication reflected the complexity of the aim. A framework was adapted from nursing research which aided the researchers and participants to model the change processes involved in implementing research based practice. The researchers restricted their conceptualisation of clinical reasoning to that of Mattingly and

Fleming's (1994) three track mind; procedural, interactive and conditional (Fleming 1991), which was a little surprising given advances in the development in understanding of clinical reasoning within the intervening 30 years (Unsworth 2011b). Given this author's unfamiliarity with the Danish health care system it is not possible to say that this conceptualisation of clinical reasoning was inappropriate but, reviewing the key findings of Kristensen, Borg and Hounsgard (2012), it could be suggested that factors associated with pragmatic reasoning or worldview (Unsworth 2004) might have usefully informed the authors' methodology and analysis. The key message of the study was that consideration of the personal and professional values and experience of participating therapists as well as the buy-in of local management was critical in the implementation of evidence based practice in occupational therapy. The Kristensen, Borg and Hounsgard (2012) study was a useful study to consider as it was based in practice rather than education, which is relatively unusual. It employed a not dissimilar methodology to the study described in chapter 3 below and it combined investigation of two forms of criticality.

A number of other authors have examined critical thinking within occupational therapy but these have largely been based in education (for example Wittman and Velde 2002) or have adopted the view of critical thinking as a fairly narrow range of cognitive skills. Lederer (2007), for example, examined critical thinking dispositions in occupational therapy students (n=79) at three levels in one occupational therapy programme in the United States. Lederer (2007) used the California Critical Thinking Disposition Inventory (CCTDI) which evaluates the interviewee's internal motivation or disposition toward critical thinking on seven subscales. The study demonstrated that both undergraduate and postgraduate occupational therapy students had a strong disposition towards critical thinking and that students entering the programme with a degree had a stronger disposition to critical thinking than those without. It would be of interest within the participants of the study below to attempt to reveal if this strong disposition in graduates towards critical thinking, if transferrable from the US context, is maintained during the transition process.

The thinking and reasoning considered thus far in this chapter is both conscious and deliberative. There is, of course, another type of thinking and reasoning which is unconscious, automatic and intuitive.   An important contributor to understanding the role of unconscious, automatic, intuitive thinking and reasoning is psychologist Jonathan Evans, (for example Evans and Frankish 2009, Evans 2010).   The Nobel Prize winning psychologist Daniel Kahneman, (2011) another significant researcher into unconscious, automatic, intuitive thinking and reasoning calls this fast, emotional, intuitive thinking, System 1 thinking, in opposition to System 2 thinking which is conscious, reflective and effortful.   Kahneman's nomenclature will be adopted for the purposes of this study.   Jonathan Evans has influenced understandings within the occupational therapy profession through the work of his postgraduate student, Claire Harries, with whom he investigated General Practitioner's tacit reasoning (Evans et al 1995, Harries et al 1996, Harries, Evans and Dennis 2000) and Clare Harries subsequent work with Pricilla Harries, an occupational therapist (Harries and Harries 2001a, Harries and Harries 2001b).   Based on several decades of research, Evans (2010), Kahneman (2011) and others (for example Eagleman 2011, Manktelow 2012) support the two minds hypothesis or dual process theory of thinking, reasoning and decision making, what Manktelow (2012 p.125) calls a *"new paradigm"* in the explanation of reasoning and thinking.   Evans (2010 p.5) has proposed a Two Minds Model (figure 2) which proposes two distinct cognitive systems underpinning reasoning.   While it should be noted that this theory continues to develop, supported by neuropsychological and neuroscientific advances (table 3), efforts have been made to incorporate these understandings into nursing theory, (for example Paley et al 2007) clinical reasoning in medicine (for example Pelaccia et al 2010) and occupational therapy theory (Harries and Duncan 2009, Harries 2007, Unsworth 2011b).   However, as Pelaccia et al (2010) note the theory has thus far received fairly limited attention.

Figure 2: The Two Minds Model (adapted from Evans 2010 p.5 fig.1.2)

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                    ┌─────────────────────────────┐
                    │                             │
                    │          Behaviour          │
                    │                             │
                    └─────────────────────────────┘
                         ↑                    │
                                              │    Intuitive Mind
                                              ↖       (System 1)
          ↓        ↑                    ↓              ↑
   ┌──────────────────┐          ┌──────────────────┐
   │                  │          │                  │
   │ Explicit         │          │ Implicit         │
   │ Knowledge        │          │ Knowledge        │
   │                  │          │                  │
   └──────────────────┘          └──────────────────┘

 ┌────────────────┐   ┌────────────────┐   ┌────────────────┐
 │  Perceptual    │   │   Learning     │   │   Language     │
 │   Systems      │   │                │   │  Processing    │
 └────────────────┘   └────────────────┘   └────────────────┘

 ┌───────────────────────────────────────────────────────────┐
 │             Unconscious Support Systems                    │
 └───────────────────────────────────────────────────────────┘
```
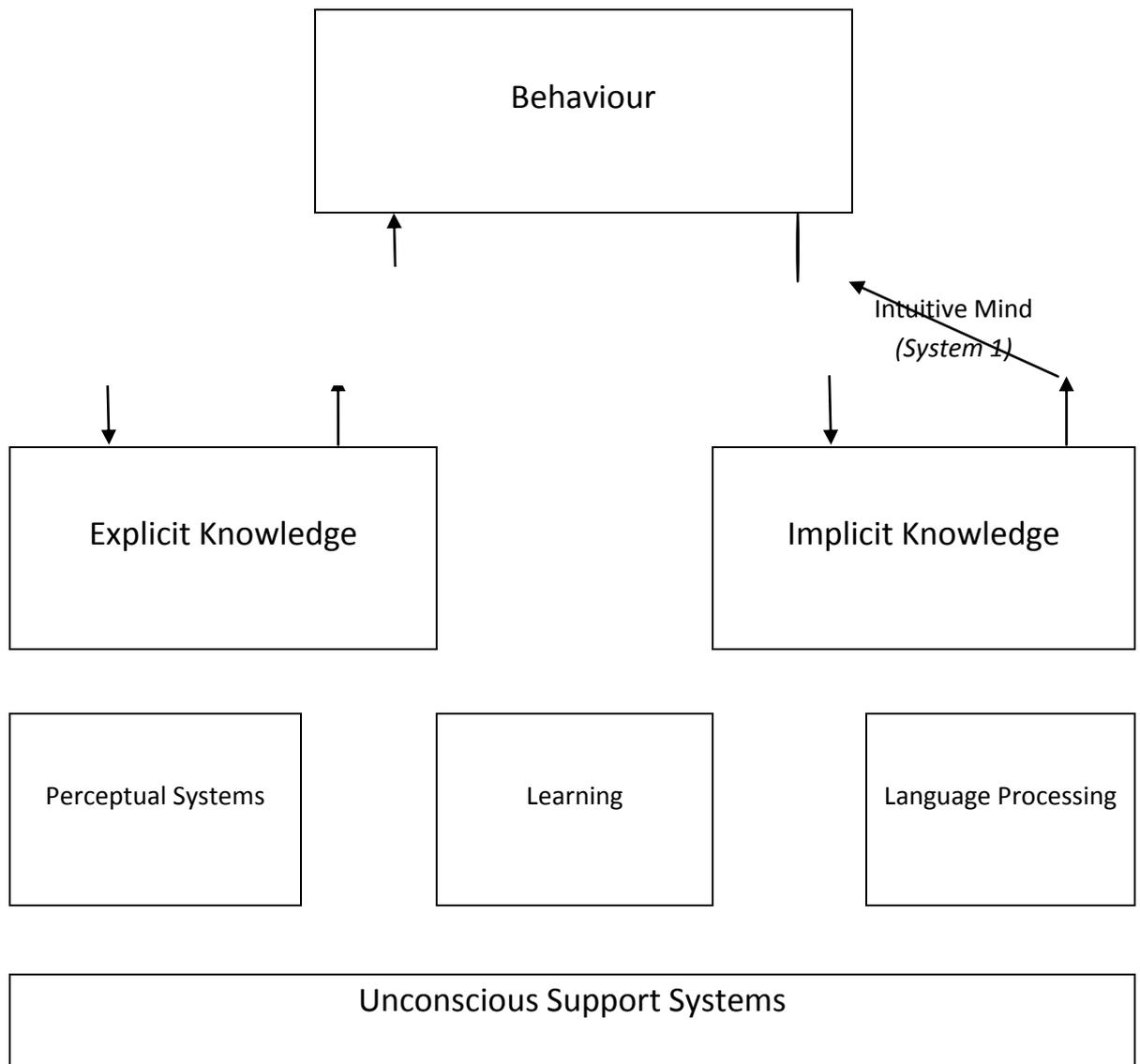
Evans (2010) Two Minds Model of is based on the understanding that although the reflective (system 2) mind feels to its owner that it is the all-controlling mind, this is in fact an illusion and most actions are controlled intuitively (system 1) without any awareness of the cognitive processes involved. Evans (2010) goes on to say that while some of our behaviour is consciously controlled (system 2), more often system 1 takes charge and system 2 only thinks it is in control. One of the major functions of system 2 is to rationalise or confabulate to maintain an illusion or self-delusion of control. Other characteristics associated with dual system theories of cognition are listed in table 4. This concern regarding illusion of control is reflected in Harries and Harries

(2001a) paper which critiques the methodologies adopted to access intuitive thinking when investigating occupational therapists' clinical reasoning. Harries and Harries (2001a) suggest that due to the methodologies adopted in studies of clinical reasoning, such as the AOTA/AOTF study (Mattingly and Fleming 1994), the reasoning of experts, the bulk of which may be intuitive (system 1), had not been fully captured.

Table 3: Some dual-process accounts of cognition (adapted from Evans 2010, table 1.1, p.20)

Key Theorist / Researcher	Intuitive mind (system 1)	Reflective mind (system 2)
Reber	Implicit	Explicit
Epstein	Experiential	Rational
Chaiken	Heuristic	Systematic
Evans	Heuristic	Analytic
Sloman	Associative	Rule based
Various	Automatic	Controlled
Hammond	Intuitive	Analytic
Lieberman	Reflexive	Reflective
Nisbett	Holistic	Analytic
Wilson	Adaptive unconscious	Conscious

The problem as Evans (2010 p.88) sees it, is that *"a defining characteristic of intuition is that we have no conscious access to the processes which underlie it: only a feeling of what the right answer should be. To make matters worse, the reflective mind is prone to confabulate rational sounding explanations for our intuitions that may be quite misleading. So people can be biased without being aware of the fact".* Evans (2010) highlights other aspects of thinking, belief and behaviour that are of relevance to this study, which are social influence, conformity and obedience.   He sees thinking and behaviour not only as an outcome of education or communication but as product of the social influence of the people with whom we are connected. Evans (2010 p.150) states *"the main reason that people believe things is because*

other people believe them as well, especially when those other people are members of the same

social group ... beliefs are not based on personally verifiable observations or founded in universal,

evidence based science ... social psychological research shows, norms of our peer group provide a

very strong basis for our beliefs and behaviours".

Table 4: Attributes associated with dual system theories of cognition (Evans 2010, table 1.2, p.21)

Intuitive Mind (System 1)	Reflective Mind (System 2)
Evolutionary old	Evolutionary recent
Shared with animals	Unique to humans
Unconscious, pre-conscious	Conscious
High capacity	Low capacity
Fast	Slow
Automatic	Controlled or volitional
Low effort	High effort
Parallel	Sequential
Implicit knowledge	Explicit knowledge
Contextualised, belief based	Abstract, decontextualised
Linked with emotion	No direct link with emotion
Independent of individual differences in general intelligence and working memory capacity	Correlated with individual differences in intelligence and working memory capacity
Ecological or evolutionary rationality	Normative rationality

While Evans (2010) doesn't make this link, in background reading for this chapter the author

reviewed the work of Susan Blackmore on consciousness (Blackmore 2010) and was introduced

to the concept of memes. The theory of memes was originally proposed by Dawkins (1989) and

has been further developed by Blackmore (1999, 2010), Dennett (1991) and others. It should be

acknowledged that the concept has not gained universal acceptance, for example, Steven Pinker

(1998), another author who has considered the evolution of consciousness and cognition, is

critical of the concept stating that *"a mind that passively accepted ambient memes would be a sitting duck for exploitation by others and would have quickly been selected against"* (Pinker 1998 p.210). It could however be argued, admittedly light-heartedly, that the first part of Pinker's argument is exactly the premise which sustains the contemporary multi-million pound advertising and marketing industry and has yet to lead to consumer extinction. Meme is defined by the Oxford English Dictionary as: an element of culture that may be considered to be passed on by non-genetic means, especially imitation. Examples of memes might be particular words, beliefs, theories, rituals, practices or behaviours. It was thought that within the data generated by the study below ideas, beliefs and behaviours might emerge that were part of what could be usefully conceptualised as elements of a culture specific professional folk knowledge or series of memes. In this case the culture or social group could be that of occupational therapists or occupational therapists within a specific location or a multidisciplinary team. Referring back to Evans (2010) ideas about norms, beliefs and behaviour, it was thought that it would be important to capture this data as they may well be major determinants of behaviour.

Moving from system 1 to system 2 thinking, the elements that the study sought to capture were those of the critical thinking person Barnett (1997) i.e. critical self-reflection, critical reason and critical action. As mentioned in section 2.1 above reflective practice is well embedded within the occupational therapy profession and other health professions, building on the influence of Donald Schön. There is significant body of literature promoting reflective practice and reflective learning within the profession (for example Quick, Forsyth and Melton 2007, Wimpenny et al 2006, Morley 2007a, Bannigan and Moores 2009, Morley, Smith and Petty 2011) although it could be suggested that conceptualisations of reflection and reflective practice understandably tend to mirror Schön's ideas. Authors such as James Atherton (2012) from DeMontfort / University of Bedfordshire and David Boud (2010) have questioned the impact of reflection within healthcare and social work and asked why reflection is privileged over established knowledge as, given its individualistic nature, it is open to considerable cognitive bias, particularly

confirmation bias, i.e. Evans' (2010) system 2 thinking engages in confabulating rational sounding explanations to support and / or justify the original reflection. Following Barnett's (1997) critique of Schön's conceptualisation of reflection and consideration of selected literature on the practical use of reflection in clinical settings (for example Gopee 2011, Cassedy 2010, Bond and Holland 2010) which was found to either promote a narrow view of (Gopee 2011, Cassedy 2010), or identify limitations in, (Bond and Holland 2010) the application of reflective learning in practice, it was also of interest to the author to identify the level of criticality in the study participants' accounts of reflection.

The next form of criticality contributing to the stance of the critical person, as conceptualised by Barnett (1997) was critical reason. This is critical thinking focussed on the thoughts, ideas, writing and publications of others, analysis, synthesis and logical arguments. It can be seen that this form of criticality is essential in knowledge building and generation and will underpin evidence based or evidence informed practice, as well as perhaps elements of clinical supervision. Barnett (1997 p.68) argues that *"higher education has taken its dominant conception of critical thinking to be that of CT1 (*critical reason*), of critical thinking focussed on formal bodies of thought".* It could be argued that Barnett (1997) is incorrect; that if that statement was to be applied to occupational therapy graduates or graduates of a number of other healthcare professions, the dominant conception of critical thinking would be critical self-reflection and that until relatively recently critical reason was perhaps undervalued. For example, while the profession (College of Occupational Therapists 2009b) espouses and promotes the graduate attributes listed in table 5 below, there is evidence that practitioners have not until relatively recently been equipped with the critical reason /critical thinking skills necessary to engage with evidence based practice. Although the British Journal of Occupational Therapy published a special edition on evidence based practice as early as 1997 including a step-by-step guide to evidence based practice (Taylor 1997) it is unclear nationally and internationally how far evidence based practice has become embedded within professional practice. Few

studies have investigated this issue and those that have report generally favourable attitudes to evidence based practice but multiple barriers to its implementation, not least the relatively limited research base in occupational therapy.

Table 5: Occupational Therapy Graduate Profile: College of Occupational Therapists (2009b p12)

The occupational therapy graduate is able to:

i Identify the need for research on issues related to occupation, occupational therapy and/or occupational science and formulate relevant research questions.

ii Search independently, critically examine, synthesise and utilise scientific literature and other information relevant to occupational therapy.

iii Understand, select and defend designs and methods appropriate to research in occupation and occupational therapy, including ethical considerations.

iv Interpret, analyse, synthesise and critique research findings relevant to occupational therapy.

v Contribute to the development of new knowledge of occupation and occupational therapy practice, particularly in relation to local and/or emerging health and social challenges.

vi Disseminate research findings in a variety of ways to a range of stakeholders.

For example, Lyons et al (2010), a team of Australian, Irish and Chinese occupational therapy researchers, investigated a sample of occupational therapists (n=145) in the United Kingdom who specialised in paediatrics. The aim of the study was to survey the knowledge, attitudes, practices and barriers to implementation of evidence-based practice and utilisation of research findings. The team gathered their data using a demographic questionnaire and three previously validated survey tools, (all cited in Lyons et al 2010) the *Research Knowledge, Attitudes and Practices of Research Survey* (KAP Survey; Van Mullem et al 1999), The Edmonton Research Orientation

Survey, (EROS; Pain et al 1996) and the Barriers to Research Utilisation Scale (BARRIERS; Funk et al 1991). They demonstrated that those who responded to the survey were enthusiastic about accessing and implementing research findings and about the potential of research to guide practice in general. The respondents identified barriers to implementing research or becoming involved with research themselves. Significantly these related to time available, knowledge of research practices, in particular organising research and getting to the stage of making a research proposal. The authors quite rightly highlighted the rate of return (30%) and potential positive response bias as limiting factors in the study. There were other aspects that may have influenced their results, for example they report that 50% of their sample was educated to baccalaureate level but fail to identify that almost as many had a diploma or certificate as their highest academic qualification. Their sample was also perhaps biased towards the upper end of the age demographic; more than half of their respondents were over 40years old. Undoubtedly their sample will have included a proportion of people who entered the profession as mature students but it might be suggested that a significant proportion would have qualified as occupational therapists before the mid to late 90s and the rise of interest in evidence based practice as well as undertaking preregistration courses that had limited research methods content. Lyons et al (2010) was a useful study to consider for the purposes of the study below as one of the first of its kind, its moderately large sample size (145) and its identification of barriers to engagement with evidence based practice. It raised questions for the researcher about a dichotomy between the attributes of new graduates (table 5) and what happened to their critical reasoning skills. Looking at the demographics of Lyons et al's (2010) sample it is likely that the number of new graduate practitioners that they sampled was restricted. Do new graduates work in paediatrics? Were the new graduates engaging with evidence based practice? How quickly do knowledge of research practices and research methods skills erode?

The findings of Lyons et al (2010) were supported by findings from earlier studies, although these had mainly been conducted 10 – 15 years previously. This consistency in findings was somewhat

surprising given the support for implementation of evidence based practice in the intervening years and the promotion of evidence based practice within undergraduate curricula. Lyons et al (2011) went on to duplicate this study in Australia with paediatric occupational therapists. While there were some slight differences in the findings between the two studies, possibly less confidence in the Australian sample in implementing research and in ranking barriers, the findings and conclusions were not dissimilar. Examples of studies that had similar findings to Lyons et al (2010) include those of Curtin and Jaramazovic, (2001) in the UK and McCluskey (2003) and Bennet et al (2003), both from Australia. McCluskey (2003) demonstrated self-rated low levels of skills and knowledge pertaining to evidence based practice in a survey of 67 Australian occupational therapists. In addition these therapists identified time constraints, organisational factors and limited critical reason (Barnett 1997) type skills in the collation, appraisal, analysis and synthesis of evidence. As identified in McCluskey's (2003) paper, caution would be required in generalising the result from her study as the sample was drawn from a group who had elected to attend post-graduate training in evidence based practice. Interestingly, given the arguments presented regarding critical self-reflection above, the only two areas where McCluskey's (2003) sample expressed self-rated moderate or high levels of confidence in knowledge and skills related to evidence based practice were *"skills to review and evaluate own practice"* and *"skills to change own practice in response to new evidence"*, (McCluskey 2003 p.7) both of which would require well developed reflective abilities.

Bennett et al (2003) conducted a large postal survey of a random sample of Australian occupational therapists using a self-completed questionnaire adapted from a tool previously used with GPs. In summary, the findings of Bennett et al's (2003) study largely reflected those of the studies above. It was not possible to isolate the experience of new graduates from the larger sample but Bennett et al (2003) did demonstrate that more recently qualified therapists with <5years experience were significantly more likely to rely on knowledge from their undergraduate education ($p < 0.001$) and information from colleagues ($p < 0.001$) when making clinical decisions

than their more experienced peers. For the sample as a whole, sources of information underpinning clinical decision making were most commonly clinical experience (96.3%, n=625), continuing education (81.9%, n=532) and colleagues (79.9%, n=519). The knowledge that the less experienced therapists were using their critical reason to evaluate was therefore, broadly, either their own pre-existing knowledge or the reflective knowledge, developed through experience and continuing education, of their colleagues. It was interesting to investigate whether this was reflected in the new graduate participants in the study below. Consistent with the findings of the above studies Curtin and Jaramazovic, (2001) who used a mixed methods research methodology to investigate the perceptions of 500 UK occupational therapists demonstrated a positive disposition amongst therapists towards evidence based practice but uncovered organisational issues, access to resources and lack of skills and knowledge as being barriers to engagement with evidence based practice.

In summary, with regard to critical reason, a number of questions were posed for this study based on existing research. While occupational therapists seem to be positively disposed to evidence based practice it was unclear to what extent it was being integrated into practice particularly by new graduate practitioners. The Bennett et al (2003) study raised the question of what sources of knowledge were being critiqued by new graduate therapists in decision making, given that more experienced therapists appear to predominantly use experience (96.3%, n=625) in each of their clinical decisions.

Barnett's (1997) third form of criticality contributing to the critical person is critical action. Some authors, for example Alfaro-LeFevre (2009) suggest that the terms clinical reasoning and critical thinking (and clinical judgement) can be used interchangeably. In the author's opinion there is a clear delineation between the terms; clinical reasoning is focussed on the problems of practice; the ability to engage in critical thinking underpins effective clinical reasoning but is not just the preserve of health and social care professionals. In addition critical thinking can be employed by

health and social care professionals outside practice settings, for example in making choices about child rearing or engagement in leisure pursuits. The author's conception of Barnett's (1997) critical action as being analogous with clinical reasoning could be questioned. Barnett's work was and is primarily in the realm of higher education. However the parallels between the concepts are evident. Both are in-world thinking, requiring engagement with the world. They require re-construction of worlds. On reflection, this perhaps appealed to the existentialist conceptualisation of occupational therapy adopted by the author at times, whereby occupational therapy can be viewed as a world-changing intervention; changing one world at a time. Critical action requires *"an ability to size up the world in its different manifestations and the capacity to respond in different ways ... the willingness to evaluate the world, howsoever it appears"* (Barnett 1997 p.87). Barnett (1997 p.85) discusses the incorporation of what he terms *"action elements"* within higher education courses which are designed to develop critical action in students. What Barnett (1997) goes on to describe is in occupational therapy terms primarily called practice education placement, although other learning experiences, e.g. community visits, clinical skills simulations etc. could also be seen as action elements involving immersion in the real world. The new graduate therapist is very much immersed in the real world and requires the ability to engage in critical thinking in order to negotiate that world. Critical thinking that is immersed within the world of practice, which takes on the form of criticality called critical action, at some levels, has close parallels with current conceptions of the thinking and reasoning processes called clinical reasoning. Investigation of the participants' clinical reasoning was one of the aims of the study described below.

2.4: Clinical Reasoning

The author was faced with something of a dilemma in electing to use the term "clinical reasoning" in this study. The College of Occupational Therapists (2009a) has incrementally

moved away from the use of this term, in preference referring to "professional reasoning". Occupational therapists in the UK have for some time shied away from the term "clinical" as many UK therapists are employed out with clinical settings, provide interventions for "clients" rather than "patients" and, for example, provide practice education placements rather than clinical placements for students. Out with the UK "clinical reasoning" is frequently the preferred term, for example in New Zealand (Robertson 2012a), Canada and Australia (Unsworth 2011a), Scandinavia (Kristensen, Borg and Hounsgaard 2012) and the United States. Within the UK, other health professions such as medicine (Pelaccia et al 2011) and physiotherapy (Ajjiwa and Higgs 2007) continue to use the term "clinical reasoning" and the term is not entirely redundant within the UK literature (Sinclair 2007, Nikopoulou-Smyrni and Nikopoulos 2007). The author has elected to use the term clinical reasoning in this study for a number of reasons:

1. The author wished to delineate between critical thinking; broadly the kind of thinking that characterises professionalism, and clinical reasoning; broadly the form of critical thinking that directs actions and interventions undertaken by health professionals.

2. Participants in this study were all based in the NHS and in clinical settings.

3. Clinical reasoning is a familiar and well recognised term within the occupational therapy professional literature spanning the past 20-25years.

4. Communication between interviewer and interviewee would be facilitated by using terms understood by both.

While recognising the value in some of the alternative descriptions, Unsworth (2011b p.210), faced with a similar dilemma, elected to use the term "clinical reasoning" in preference to "therapeutic reasoning", "professional reasoning" or "occupational reasoning" stating that *"renaming the clinical reasoning rose does not make it smell any sweeter".* Unsworth (2011b) went on to list the current conceptualisations of clinical reasoning emerging from her own work and that of other authors (summarised in table 6) and presented a summary of existing research

and added a number of related constructs, including dual process theory, referred to above (Evans 2010, Kahneman 2011).

Table 6: Types/Modes of clinical reasoning in occupational therapy and related constructs (summarised from Unsworth 2011b, p.212-216 and Unsworth 2011a)

Type of Reasoning	Description
Procedural reasoning	The thinking associated with evaluations (including systematic data collection, hypothesis formation, and testing), interventions, and how the client is performing.
Interactive reasoning	Reasoning that guides therapist interactions with the client for example engaging the client in therapy, considering the best approach to communicate with the client, understanding the client as a person, understanding the client's problems from the client's point of view, individualising therapy, building a shared language of actions and meanings, and monitoring how the session is going.
Conditional reasoning	Reasoning takes into account the whole of the client's condition as the therapist considers the client's temporal, personal, cultural, and social contexts. It is used when trying to understand what is meaningful to the client in his or her world and future worlds.
Generalisation reasoning	Reasoning that therapists use within the forms of procedural, interactive, conditional and pragmatic reasoning, to draw on past experience or knowledge to assist themselves in making sense of a current situation or client circumstance.
Pragmatic reasoning	Thinking related to the therapist's practice context (organizational, political environment, and economic influences such as resources and reimbursement), and may include elements of personal contexts (including the therapists' own motivation, life knowledge, assumptions, negotiation skills, and ability to read the practice culture).
Ethical reasoning	Thinking that accompanies analysis of a moral dilemma or moral conflict, the generation of potential solutions and selection of actions
Diagnostic reasoning	Identifies pathologies or impairments in occupational performance, defines outcomes, goals, treatments and solutions
Scientific reasoning	Hypothesis generation and testing sometimes called hypothetico-deductive reasoning. Used to make a diagnosis of medical conditions or by therapists to identify occupational problems. Associated with procedural reasoning.

Where this author diverges from Unsworth (2011b) is in her propositions that *"The S1 system (system 1) is more focussed on the art of clinical reasoning and the S2 (system 2) on the science of*

objective decision-making" (Unsworth 2011b p.210) and *"some of these terms, such as procedural, interactive, conditional and pragmatic reasoning, fit better within an S1 (system 1) or reasoning approach to understanding thinking processes. Other terms, such as scientific and diagnostic reasoning, fit better within an S2 (system 2) approach"* (Unsworth 2011b p.217). It is this author's view that while scientific and procedural reasoning are undoubtedly underpinned by system 2 thinking, that the other forms of reasoning listed cannot be represented as system 1 thinking but are better conceptualised as system 2 undertaking one of its primary functions which is to *"confabulate"* or rationalise system 1 thinking to which we have no conscious access (Evans 2010 p.88).

As can be seen from table 6, there is some overlap in the conceptualisation of the forms of clinical reasoning and this is understandable given the multiple sources on which Unsworth (2011b p220) has drawn. Usefully Unsworth (2011b) recognises that understanding of clinical reasoning continues to evolve and highlights the relative scarcity of empirical studies of clinical reasoning in occupational therapy. However, Unsworth (2011b) goes on to suggest the development of a unifying theory and model of clinical reasoning built upon the foundation of Mattingly and Fleming's (1994) AOTA/AOTF clinical reasoning study. As highlighted in the introduction to this chapter one could question why Mattingly and Fleming's (1994) study has been chosen as the cornerstone for this proposed unifying theory and it could further be asked whether this is linked back to the scarcity of other empirical studies of clinical reasoning. Where this author is in agreement with Unsworth (2011b) is in her assertion that it is too early to map out the theoretical structure, function and relationships. This view is supported by authors such as Pelaccia et al (2011) writing on the implications of dual process theory for clinical reasoning in the medical profession who identify that a great many grey areas remain in understanding clinical reasoning, particularly in relation to dual process theory and that multiple research themes are still unexplored.

From a mainly nursing perspective, although the team of authors incorporated one occupational therapist, (Edward Duncan), Paley et al (2007) have suggested that current conceptualisations of nursing "ways of knowing" (Carper 1978) should be abandoned in the light of dual process theory. Barbara Carper's (1978) early work in pursuing the development of a nursing science is perhaps reflected in the occupational therapy profession's parallel quest for an occupational science (Yerxa et al 1989), and remains instructive reading. Her emphasis on the value of knowledge other than empirically derived knowledge to practitioners is undoubtedly reflected in early definitions of evidence based practice (Sackett et al 1996). However, where Carper's theory can now be questioned is in the equal value that it apportions to empirically derived knowledge and what she terms "esthetics" (Carper 1978 p.16). As Paley et al (2007) highlight, in practice settings, system 1, analogous with Carper's "esthetics", predominates, with system 2 an unequal partner. It remains unclear at this point what a unifying theory or model would add to understandings of clinical reasoning in occupational therapy.

Of particular relevance to the study described below is the work of Sinclair (2007) who investigated the differences and similarities in the clinical reasoning adopted by a purposive sample (n=12) of occupational therapists employed in different specialities in Hong Kong. Patient treatment sessions were recorded and analysed, the therapists were interviewed immediately on completion of their patient treatment and the therapists were scaled on a continuum from novice to expert based on a number of predetermined factors. The data gathered from the therapists were correlated with descriptions of clinical reasoning generated from the existing literature and a matrix was developed. The matrix plotted levels of skill acquisition adapted from the Dreyfus and Dreyfus (1980) / Benner (1982) models against facets of clinical reasoning. There were obvious limitations in the study in terms of the number of participants and the description of the methodology is incomplete. Unfortunately no novice therapists were included in the study so it is unclear how that column of the matrix was developed. However what was interesting was Sinclair's (2007) finding that, on her novice to expert continuum, therapists did not always fit into

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one level of reasoning and could, for example be performing at a level consistent with the theoretical description of a proficient therapist on one facet of clinical reasoning while performing at a level consistent with that of an advanced practitioner on another facet. This finding was in contrast to that of the AOTA/AOTF clinical reasoning study (Mattingly and Fleming 1994) which suggested that clinical reasoning should be viewed as developing on a staged continuum from novice to expert practitioner. While the findings of both studies should be viewed with caution given the small numbers of participants and therefore the very small numbers of therapists who might potentially meet the criteria for each level of skill acquisition this conflict in the literature was of interest within the study described below which did include participants who were termed novices.

A number of authors have investigated the clinical reasoning of new graduate occupational therapists and the development of clinical reasoning skills in undergraduates. Understandings gained from the nursing and medical professions, both of which have more extensive histories of research into clinical reasoning, have been incorporated into the occupational therapy literature. Like the studies of clinical reasoning identified above, where data were gathered from no novices (Sinclair 2007), or very limited numbers of novices (Mattingly and Fleming 1994), studies of clinical reasoning in new graduate occupational therapists have tended to have very low numbers of participants (Unsworth 2001) (n=2), (Seah, Mackenzie and Gamble 2011) (n=8), (Tryssenaar and Perkins 2001) (n=3), (Gibson et al 2000) (n=1) or draw participants from specific and potentially unrepresentative contexts (Unsworth 2001). The research methodologies adopted by researchers are generally qualitative and may incorporate interviews, journals, videorecordings and reflections. As discussed above, there is some disagreement in the literature about what constitutes a novice. For example, Creek (2007) views occupational therapy students as novice practitioners, stating that, at graduation, occupational therapy students should have as a minimum reached the level of advanced beginner, as defined by Dreyfus and Dreyfus (1980) and Benner (1982). Creek's (2007) assertion would certainly be supported by The NHS Employers

(2012) Na*tional Profile for Occupational Therapy - Band 5, the banding at which most graduates enter the profession, which maps more closely to Dreyfus and Dreyfus and Benner's definitions of an advanced beginner or competent practitioner than a novice. Other authors such as Quick, Forsyth and Melton (2007) or T*ryssenaar and Perkins (2001), supported by data from their qualitative studies*, suggest that transitioning from novice to competent practitioner can take up to a year post-graduation.*

Research on clinical reasoning in occupational therapy practitioners has primarily revealed that there are differences between the reasoning of new graduates and experts. This is supported by understandings gained from other health professions. There is a fairly widespread perception within the literature (for example Robertson 2012c) that novices or new graduates rely on procedural reasoning to a greater extent than expert therapists, which may be true, but is open to question as the theory is based on studies of very small numbers of novice or new graduate therapists working in contexts that would particularly encourage procedural reasoning (Mattingly and Fleming 1994, Unsworth 2001). As Unsworth (2011b) later identified, while the differences in clinical reasoning between novice and expert are readily identified, further research is required to distinguish transition between the three intermediate levels.   This does however rather presuppose a transitional continuum through the levels which authors such as Sinclair (2007) have questioned.

A number of studies have examined strategies to aid the development of clinical reasoning in novices. Kuipers and Grice (2009) examined the influence of a domain-specific protocol on the clinical reasoning of purposively sampled novice (n=13) and expert (n=8) occupational therapy practitioners. The researchers gathered data from their participants using repertory grid interviews before and after exposure to the protocol. Their definition of novice was fairly broad as therapists with four or less years of experience were included in this group and the mean of experience was 1.8 years, by which time authors such as Quick*, Forsyth and Melton (2007)*

suggest the transition to competent therapist should be complete. Despite this Kuipers and Grice (2009) were able to demonstrate differences in the reasoning employed by the group of novices in comparison with the expert group. They identified that after exposure to the protocol there was a significant change in the structure of the novice group's clinical reasoning and no significant difference in the expert's clinical reasoning. The novices' reasoning evolved to mirror more closely that of the experts suggesting that for interventions with a very discrete group of patients, a domain specific clinical reasoning protocol may assist development of clinical reasoning in novice occupational therapists.

Gibson et al (2000) compared the clinical reasoning of one novice and one expert practitioner. The novice had one year or less of experience. While generalizing from the experience of one therapist is problematic, from Gibson et al's (2000) findings, questions raised of relevance to the study below include the potential existence of cookbook style, highly structured, process centred thinking; limitations in thinking about prioritizing and limited interactive reasoning about a paper case. While not the objective of the study Gibson et al (2000) postulated that reflection on practice might increase awareness of clinical reasoning. A second incidental finding was *"a certain amount of cognitive dissonance"* (Gibson et al 2000 p.27) on the part of the novice therapist where she expressed an ideal in her approach that was not supported by the observations of the researchers. On reflection she identified conflicts due to service constraints. Was this evidence of system 2 thinking (Evans 2010) confabulating to address a conflict between an intuitive ideal and a pragmatic reality?

One other study (Harries and Gilhooly 2011) of techniques to enhance the development of clinical reasoning in occupational therapists is of particular relevance to the study below. Harries and Gilhooly (2011) examined the potential of using expert occupational therapists' referral prioritisation policies to train novices (n=37) in referral prioritisation. Novices in this case were final year undergraduate students and a pre-test /post test research design was adopted. The

results demonstrated that after completion of the training package, which was generated from the prioritisation policies of expert therapists, the novices' reasoning in prioritising the referrals showed a statistically significant improvement in referral prioritisation, response to cues in the referrals, and consistency of using policies. They were able to rate referrals and interpret cues like the expert therapists. Overall the authors supported the training of novices using the reasoning of experts to enhance clinical reasoning and thereby occupationally focussed practice. While it remains unclear whether these findings are directly applicable to practice, the study does give an indication that accessing and critiquing the knowledge and reasoning of expert others (critical reason) in a specific situation may have the potential to enhance clinical reasoning (critical action).

While the study outlined below aimed to investigate clinical reasoning in some detail, there was a consciousness that clinical reasoning might not be the only form of critical action evidenced. The College of Occupational Therapists' Curriculum Guidance for Pre-Registration Education (2009b) highlights a transformative vision for occupational therapy through engagement with individuals, groups, communities and society and the medium of occupation. It was thought that with the graduate profiles of the Curriculum Guidance for Pre-Registration Education in mind there may be some evidence of Barnett's (1997) upper levels of criticality in the analysis of the participant interviews.

As part of the literature review some conceptions of reasoning from out with health and social care were examined. Studies of human reasoning undertaken to underpin the development of artificial intelligence revealed three kinds of reasoning that were subtly different from the forms of reasoning identified in the studies above. Case based reasoning (CBR) (Kolodner 1993) had superficial similarities to Unsworth's (2005) generalization reasoning but specifically uses recall of cases, which in the instance of occupational therapists would be patient or client cases, to inform the solution of new cases. While this form of reasoning was conceptualised in the sphere of

artificial intelligence applications within healthcare have been increasingly realised, for example, automated case based reasoning has been employed in classification tasks, diagnostic tasks, training and cataloguing or recording (Bichindaritz and Montani 2011). The difference between this type of reasoning and Unsworth's (2005) generalization reasoning is that CBR relies on recall of specific, previously experienced, concrete, problem cases and reusing these in a new problem situation whereas Unsworth (2005) describes generalization reasoning as drawing on more general knowledge to resolve current problems. Unsworth's (2005) therapists reflected on general experiences and knowledge (made generalizations) then refocused their reasoning on the client. Unsworth (2005) described generalization reasoning as a subcategory of the existing forms of reasoning; procedural, interactive and conditional, described by Mattingly and Fleming (1994). Given the growth in interest in CBR and rising numbers of applications in healthcare since 2005, it was thought that this form of reasoning might be explored in the study below.

Two other forms of reasoning identified in the development of artificial intelligence were of interest. Occupational therapy theorists use models extensively in order to translate or simplify complex concepts and bridge the challenging theory-practice gap. The author was aware of initiatives within the occupational therapy profession in the locality of the study to embed conceptual models of practice. In artificial intelligence model based reasoning, a pre-existing model is developed. In application, knowledge of the model is combined with observations to come to a prognosis. This type of reasoning has been used in, for example the development of diagnostic tools and physician decision support systems in diabetes management (Montani 2003). It was thought that participants in the study below might make reference to conceptual models in supporting their thinking and reasoning. Finally, an analogy with the use of artificial intelligence expert systems was drawn. The application of clinical guidelines, standards and protocols in practice which allow the individual practitioner to access the critical reason of a panel of expert practitioners, for example Cochrane reviewers, was thought to be analogous to

the use of expert systems in artificial intelligence. It was thought that therapists may identify this type of reasoning in their accounts.

In summary, clinical reasoning is a hypothetical construct, understanding of which continues to evolve. Understanding and articulation of clinical reasoning is desirable for a multitude of reasons, for example to enhance communication with patients and clients and to work towards improving efficacy of treatment, to aid decision making, to facilitate the training of students and new graduates, and to communicate and share knowledge. Perhaps one of the most important reasons for articulating clinical reasoning is that challenges to our cognitive biases, assumptions and social norms are then permitted. A review of the literature demonstrates that relatively little is known about the clinical reasoning of new graduates other than it differs from the reasoning of experts and that it can be improved in specific situations, particularly by permitting access to the reasoning of experts, whether expert practitioners (Harries and Gilhooly 2011*)* or expert systems (Kuipers and Grice 2009). There are conflicts in the literature regarding the definition and criteria used to determine who is a novice and the existence of a continuum of cognitive skill development through which a novice will perhaps pass on the way to becoming an expert. In the next section the experience of transitioning from new graduate to competent practitioner will be examined.

2.5: The experience of transitioning

The experience of transitioning from new graduate to competent practitioner is recognised as being a stressful process for the new graduate. The term *"reality shock"* originally came from Kramer's (1974) research involving three cohorts of baccalaureate nursing students in from 3 colleges in the United States. Kramer (1974) identified a division between academic values and workplace values which could be bridged by a socialisation program and that students

participating in this program had greater job satisfaction and were able to operationalize their values more successfully than a group of controls. Reality shock has been recognised in transitioning graduates in medicine (Boshuizen 1996), although termed "the shock of practice", and re-imagined by nurse researchers as "transition shock" (Duchscher 2008). One of the most extensive and impressive studies of transition shock was a ten-year, multi-part study undertaken by Judy Duchscher (2008, 2003, 2001) a Canadian nurse and researcher. Duchscher (2008 p.2) built on the work of Kramer (1974) and characterised transition shock as *"subsuming elements of transition theory, reality shock, cultural and acculturation shock, as well as theory related to professional role adaptation, growth and development and change theory".* Duchscher conducted four qualitative studies collecting data from 30 nurses plus she reviewed data from a three part Australian study. Duchscher's (2008) early studies were conducted using a phenomenological research methodology and the last used grounded theory. Duchscher (2008) characterised transition shock as being a non-linear process of moving from a known role to a relatively less familiar role. During this process conflicts become evident between the familiar relationships, roles, responsibilities, knowledge and performance expectations of the academic environment and those required in practice. Personal energy levels and emerging professional self-concepts are challenged leading to anxiety, self-doubt, exhaustion, low confidence, conflicted emotions and isolation. Of particular relevance to the study below were Duchscher's (2008) findings that new graduates perceived themselves as being slower than experienced colleagues in decision making, reasoning and routine tasks. They spent more time on reflecting on knowledge from undergraduate education and on safety issues. The participants frequently expressed concern about engaging in practice situations beyond their self-perceived cognitive or experiential comfort level. This comes as a surprise to the new graduates, hence the shock element. Duchscher's (2009) recommendations were that new graduates should undergo an evolving programme of mentorship on entering practice, supervised by experienced

practitioners; they should be placed in relatively sheltered settings and be exposed to complex practice gradually and with consistent feedback.

The findings of Duchscher (2008), building on the work of Kramer (1974) have subsequently been supported by other nurse researchers, for example Dyess and Parker (2012) who successfully used understandings gained from the earlier work to design, implement and evaluate large scale programmes designed to increase retention rates in graduate nurses in Florida. Dyess and Parker (2012) highlight that the single most important factor that has a negative impact on rate of retention in new graduate nurses is transition shock.

Within Scotland, understandings gained from the work of Kramer (1974) and others informed the commissioning of NHS Education Scotland to develop Flying Start, an online educational resource intended to support transition from student to competent practitioner for all newly qualified health practitioners including AHPs. Evaluation of Flying Start (Banks et al 2011) was undertaken by means of telephone interviews, focus groups and online surveys. The methodology adopted by Banks et al's (2011) was somewhat questionable and the findings a little equivocal. The major findings were that new graduates found clinical skills development and confidence improved with engagement with Flying Start and that 79.4% (n=434) of the respondents had difficulty obtaining time to complete the modules. However, as there was no control group and intuitively it might be expected that clinical skills and confidence would improve during the first year of practice, might this be evidence of a placebo effect? Also as the online survey was conducted with users of Flying Start might they not have a positive disposition towards the initiative in the first place? The fact that participants were given financial inducements as well as CPD time by some Health Boards in order to complete modules is not mentioned by the researchers. The impact of the modules on learning is reported by means of raw frequency scores and it is not clear that the differences in these would have reached statistical significance in support of the researchers' claims of a self perceived effect on confidence and clinical skills. There were some useful

understandings to be gained from this evaluation (Banks et al 2011) however. The participants continued to highlight difficulties in transitioning and they were very much focussed on learning associated with learning the job and establishing themselves in the team or specialty and contact with (human) mentors appeared to be particularly valued. Newly qualified practitioners in rotational posts had marked difficulties in engaging with the programme including the differences between posts and difficulty accessing mentors as they rotated.

The transitioning experience of new graduate occupational therapists has been of interest to researchers internationally. Tryssenaar and Perkins (2001) studied the experience of transitioning of 3 occupational therapy graduates and 3 physiotherapy graduates of a Canadian University. It is unclear how representative the experience of these six female graduates was as four chose to work abroad on graduating and one went to a remote Northern region of Canada. The researchers record that as their research progressed they became immersed in the study, frequently advising the new graduates, offering empathy and challenging particular participant dispositions. One could question whether this level of support offered to the new graduates who were acclimatising to new cultures, living abroad etc. as well as making the transition into practice might have influenced continuing participation in the study let alone the results. The authors used a phenomenological qualitative methodology, developing themes through analysis of journals that the new graduates submitted and subsequent questioning. The findings were interpreted in the light of understandings gained from three published first person accounts drawn from the nursing and teaching professions. Tryssenaar and Perkins (2001) demonstrated findings consistent with those of Kramer (1974) and Duchscher (2008) with respect to the challenge of adaptation, stress and shock of transitioning. They highlighted exhaustion, both physical and mental, and lack of supervision and mentoring as a feature of their participants' experience. Positive adaptation was aided by access to supervision and mentoring, although as only one participant in the study reported access to a senior who offered supervision, presumably much of that support must have come from the researchers, and what could be

summed up as learning through doing. The reason for highlighting the work of Tryssenaar and Perkins (2001) is that despite the readily identifiable methodological weaknesses in their work, it is widely cited (for example Glenn and Gilbert-Hunt 2012, Seah, Mackenzie and Gamble 2011, Morrison and Robertson 2011, Hodgetts et al 2007, Morley 2006c, Morley 2007a, Morley, Rugg and Drew 2007, Toal-Sullivan 2006) in the occupational therapy literature internationally and the theory generated appears to have influenced the thinking of other authors who have examined the process of transitioning in occupational therapy.

Another study that has proved to be particularly influential is the previously referred to AOTA/AOTF clinical reasoning study. During the latter part of the AOTA/AOTF clinical reasoning study a small number of junior therapists began to participate (Slater and Cohn 1991). While not an original objective of the study, the opportunity was taken to investigate the development needs of these therapists with the objective of understanding strategies to increase staff retention. The findings from the AOTA/AOTF clinical reasoning study were integrated with the Dreyfus and Dreyfus (1980) model of skill acquisition to frame a programme of staff development. It is unclear from the findings of Slater and Cohn (1991) whether staff retention was enhanced, although staff turnover ceased for the remaining duration of the research project, and the ethics and feasibility of the use of videotaped treatment of patients as a vehicle for staff development might be questioned. However a number of the findings were of interest. By engaging in a joint reflective experience in supervision, junior therapists improved their reflective abilities and had greater self-perceived insight into their own response to patients. Supervision became more effective through articulation of reasoning and enhanced problem solving. Supervisors were able to demonstrate the complexity of practice and to establish *"students"* problems Slater and Cohn (1991 p.1042) and learning needs. The authors supported the use of study groups and encouraged experienced therapists to open their own reasoning process up to examination as a vehicle for junior staff development.

Until relatively recently the experience of new graduate occupational therapists had not been extensively investigated within the occupational therapy profession in the UK. However under the National Health Service Agenda for Change agreement (NHS Employers 2005), which applied to all Allied Health Professionals working in the NHS, all new entrants joining the NHS at Band 5 were expected to participate in a Preceptorship programme. The Agenda for Change Terms and Conditions Handbook (Part 2, Section 1, paragraph 1.8) (NHS Employers 2005) stated that staff joining band 5 as new entrants would have accelerated progression through the first two points in six monthly steps, providing those responsible for the relevant standards in the organisation were satisfied with their standard of practice. This twelve month period was to be known as Preceptorship. The Preceptorship framework is an outcome-based competency framework linked to development review. A Preceptorship model was proposed by the College of Occupational Therapists (COT 2006) and developed by Mary Morley (2006a). As part of the development process Morley (2006c), Morley, Rugg and Drew (2007) and Morley (2009b) examined the experience of new graduates making the transition into practice.

Throughout the development of the occupational therapy Preceptorship model and subsequently a handbook for therapists, Morley and her colleagues used mixed methods action research to gain insights into the transitioning experience of new graduate occupational therapists. Their methods incorporated focus groups, interviews and surveys. At the outset of the development process 45 new graduate therapists based in London were surveyed by postal questionnaire (Morley, Rugg and Drew 2007). Analysis of the data determined that the new therapists had high expectations of practice as determined by their ratings against selected positive elements of junior occupational therapists' perceived roles. The highest expectations were in younger therapists and those graduating from post-graduate programmes. In contrast with Tryssenaar and Perkin's (2001) participants these new graduates received weekly (76%, n=34) or fortnightly (24%, n=11) supervision from an experienced supervisor. While this study was of value in demonstrating the supervision experiences and expectations of new graduates it could be

questioned whether the survey would capture the phenomena associated with transition shock as the elements incorporated in the questionnaire were almost universally positive in nature. This limitation is acknowledged by the authors (Morley, Rugg and Drew 2007). Almost concurrently Morley (2007b) published a paper describing action research undertaken with focus groups of new graduates (n=5), supervisors (n=4) and managers (n=5) in one NHS Trust in London, which aimed to develop a local training programme for new graduates and inform the design of a Preceptorship programme. Key findings from this piece of research that informed the study below were a mismatch between manager and new graduate expectations, the value given to joint working with a senior therapist, the challenge of dealing with politico-economic factors, the critical importance of supervision, feedback and leadership, the emphasis on clinical skills and role identity development, and the significance attached to interpersonal communication (Morley 2007b).

Later, in her evaluation of the COT Preceptorship programme (Morley 2009a); Morley interviewed four pairs of preceptors and preceptees, each pair twice; over a one year period. The findings supported Morley's earlier work in that, for example, the new graduate preceptees valued supervision as a development opportunity and the Preceptorship programme facilitated this. Interpersonal communication, peer support and opportunities for modelling were similarly valued. This study probably captured more of the elements of the shock of transition than Morley's previous studies. The challenges of the academia-practice gap, establishing role identity, discharge planning, high workloads, building relationships, MDT working, feeling unprepared and isolated, perceived high expectations, and dealing with the pragmatic realities of practice were all captured in these interviews. In revisiting the experience of new graduates, Morley (2009a) suggested that, in the intervening period, demands on new practitioners were increasing and they were expected to attain autonomy in their practice earlier in their professional career. There was evidence that engagement with Preceptorship facilitated strategies that assisted transitioning.

The work of Morley and her colleagues informed the study below. The Health Board where the study was carried out was one of the early adopters of Preceptorship and it was thought that participants might well be preceptees or preceptors and this formed a line of enquiry in the semi-structured interviews. While the study below is quite distinct from Morley's work in its focus on thinking and reasoning and methodology, there are similarities in the groups selected for interview (Morley 2007b) and interest in transition (Morley 2009a). It was thought that there may be contrasts in the findings given the differences in location, contexts and specialties of the participants.

One earlier U.K. study (Ryan 2003), while not entirely related to the current study, did incorporate a number of important understandings in its findings. Ryan (2003) used narrative analysis in conducting a study that examined the experiences of mature students (n=13) transitioning from two occupational therapy programmes in England. Her main aim was to compare their early experiences in practice and to relate these to the two distinct philosophies of their professional education programmes, one programme having adopted a problem based learning philosophy and the other having retained a traditional subject based learning philosophy. Although it is difficult to see how this might be achieved, Ryan (2003 p.11) explicitly states that she "decided not to study the clinical reasoning development of the participants as I wanted to expand my understanding of professional development in general". Ryan's study is however instructive in that it covered the first 18 months post graduation but captured narratives from the whole of the participants' professional education. While she was able to demonstrate that graduates of both programmes fulfilled the aims of each, in that they "worked and reasoned autonomously and creatively" (Ryan 2001 p.535) and in the main her work has implications for professional education, a number of Ryan's findings are of relevance to the study below. Ryan (2001) discusses what she terms "fractures" within the profession, especially within professional education, which are perhaps not dissimilar to some of the conflicts described above. Examples might be the challenges her participants experienced in articulating and

evidencing practice, bridging theory into practice and the changing contexts of practice. Parallels between the findings of this study and Ryan's are further discussed in chapters 4 and 5 below.

Ryan's study (Ryan 2003) does usefully highlight that in parallel with change within the profession, the professional education of occupational therapists has been transformed within the past two decades. Prior to 1992 most therapists were educated to diploma level with few routes to formal postgraduate qualifications. Stimulated by the recommendations of The Blom-Cooper Report (Blom-Cooper 1989), commissioned by the UK College of Occupational Therapists, by 1992 all UK occupational therapy education had moved into Higher Education, predominantly in the emerging new universities, all occupational therapists graduated with a baccalaureate degree and this became the entry-level to the profession. This move has been reflected worldwide (Seah, MacKenzie and Gamble 2011) and in the United States Master of Occupational Therapy is now the entry-level to the profession. Concurrent with the development of baccalaureate degrees, in the UK a number of universities developed postgraduate qualifications, typically Masters of Science or Postgraduate Diplomas, which allowed graduates from other cognate disciplines to qualify and gain entry to the occupational therapy profession following a truncated, typically 30 month, period of study. This was the route of entry to the profession of two of the participants described in the study below. Sadly, as alluded to above, these changes in graduate attributes have not been accompanied by any large scale research into the effect on new graduate practitioners and understandings of the transitioning experience developed from studies conducted more than 20 years ago continue to permeate the professional literature.

2.6: Summary

This review has examined selected literature from the occupational therapy profession nationally and internationally as well as guidance from professional and governmental bodies. Pertinent

literature has been incorporated from other professions. It has been suggested that the shock of practice or shock of transition is a phenomenon that has been acknowledged in the literature for almost 40 years. There is evidence that, while strategies for supporting new graduates through the shock of practice, such as Flying Start and Preceptorship, have been identified, high quality evaluations of these initiatives are somewhat lacking within the occupational therapy profession. There is evidence that the practice environment has become increasingly complex for new graduates in recent years and that critical thinking and clinical reasoning developed in academia is challenged during the process of transitioning, along with the new graduate's physical and mental wellbeing.

Bearing in mind the changing contexts of practice and education, the limitations in the professional research literature and the ongoing development of understandings gained from contemporary research into cognition, thinking and reasoning, the study outlined below was to examine the self-perceived experience of new graduate occupational therapists as they entered the workforce to become newly autonomous practitioners. In particular there was thought to be a gap in the literature regarding the critical thinking and clinical reasoning adopted by new graduates who, as their professional education has changed, perhaps have a different skill set to past new practitioners. It was thought that the expectations on these new graduates may be different following implementation of Agenda for Change and Preceptorship. Uniquely, in order to triangulate the self perceptions of the new graduates it was thought to be critically important to garner the perceptions of their supervisors and service managers on the means by which critical thinking and clinical reasoning develop to meet the expectations of patients, clients and employers. It was known that a phenomenon sometimes called the shock of practice had the potential to impede the transition between new graduate and autonomous practitioner but that this phenomenon had rarely been investigated in occupational therapy, certainly never in the context of this study, and its impact on critical thinking and clinical reasoning had never been isolated.

Chapter 3: Methodology

3.1: Introduction

This chapter will initially examine the research philosophies underpinning the study and the decision making process that led to the adoption of these particular philosophies. It will go on to describe, discuss and analyse the methods adopted in the preparation for and conduct of the fieldwork undertaken to collect data for the study and will then describe and examine the data analysis procedures. The chapter will conclude by detailing the author's critical reflections on these methodological processes.

3.2: Aim

As discussed in Chapter 1, in part this study extended research that built towards the author's Masters level study, which demonstrated that there were significant differences in the styles of clinical reasoning adopted by undergraduate occupational therapy students educated in the United States and those educated in the United Kingdom when presented with the same video and paper case history material (Robertson et al 2005, Robertson and Dasari 2005, McCannon et al 2004). As studies examining clinical reasoning in graduate occupational therapists have predominantly originated in the United States this was a finding that prompted the author to undertake further investigation. A concurrent factor was the ongoing work of Mary Morley, discussed above, (Morley 2005, 2006a, 2006b, 2006c, 2007a, 2007b, 2009a, 2009b and Morley, Rugg, and Drew 2007) on behalf of the College of Occupational Therapists, UK, which involved the development of a Preceptorship programme for new graduate therapists entering the occupational therapy profession and the involvement of this author in the early stages of piloting this Preceptorship programme in NHS Grampian. The third factor prompting this study was observations of, and conversations with, new graduate therapists and occupational therapy managers which led the author to question the readiness of new graduates for practice.

Subsequent background reading seemed to indicate that occupational therapy was not the only profession with concerns regarding the transition to practice of new graduates (Jen et al 2009, Department of Health 2004a, Department of Health 2004b). As is the nature of qualitative research, where theory and learning emerge during the accomplishment of the research, the overall aim of the study has undergone a number of revisions and these are detailed in Appendix 2. However, if one was to articulate an all-encompassing aim for the study, through examination of commonality in these developing aims, the overall aim of the study could be articulated thus:

The aim of this study was to examine, understand and conceptualise the critical thinking and clinical reasoning adopted by new graduate occupational therapists as they enter the workforce to become newly autonomous practitioners. The study obtained the perspectives of new graduates, their supervisors and service managers on the means by which critical thinking and clinical reasoning develop to meet the expectations of employers. Factors which impeded the transition between new graduate and autonomous practitioner were identified and explored.

3.3 Objectives

In common with the overall aim above and in accord with the methodology adopted for the study, the objectives for each phase of the study emerged from consideration of and reflection on the preceding phase. In summary, the objectives for phase 1 of the study as articulated in the research proposal submitted to the School of Health Sciences Research Review Group were:

1. To determine the nature of the critical thinking and clinical reasoning being employed by new occupational therapy practitioners.

2. To establish whether the scope of critical thinking engendered in students is utilised by new practitioners.

3. To garner new practitioners' perceptions on the development of their thinking and reasoning during the process of transitioning.

For phase 2 of the study the objectives that emerged were:

1. To determine the nature and scope of the critical thinking and clinical reasoning being employed by new occupational therapy practitioners as perceived by their supervisors.

2. To establish the nature of support provided by supervisors in the development of thinking and reasoning in new practitioners.

3. To examine strategies employed by new practitioners and supervisors that permit the new practitioners to meet the expectations of patients, employers and other stakeholders during transitioning.

For phase 3 of the study the objectives that emerged were:

1. To establish the nature of support provided to supervisors and new practitioners in the development of thinking and reasoning in new practitioners.

2. To determine the perceptions and expectations of professional leads/managers in terms of the critical thinking and clinical reasoning undertaken by new practitioners and the correlation with undergraduate preparation for practice.

3.4: Methodology

This study adopted a qualitative phenomenological approach in order to investigate and understand the experience of transitioning into work from the perspective of the participants who were new band 5 occupational therapists, the perspective of clinical specialist occupational therapists providing supervision to new band 5 therapists and the perspective of occupational therapy managers who employ new band 5 therapists. In particular the study concentrated on the development of the critical thinking and clinical reasoning that new graduates employ when

first faced with clients or patients as autonomous practitioners and the means by which this thinking and reasoning is fostered. In this section the approach to research adopted in the study will be discussed, analysed and justified. Initially the choice of a qualitative research methodology, secondly the adoption of a phenomenological approach and thirdly the use of interpretive phenomenological analysis will be examined.

3.4.1: Ethics and Reflexivity

Procedural ethics and the process of obtaining ethical approval are discussed below; however the selection of a qualitative phenomenological methodology requires consideration of other ethical dimensions which perhaps exist outside the more narrow institutional application of ethics. One outcome of the reflexive interview undertaken by the author in early 2011, with an experienced peer researcher, was a commitment to explore the ethics of the study in a more holistic manner than simply considering the procedures and processes required to obtain institutional approval. Ellis (2007) in a paper which examined the ethics of conducting qualitative research where researchers are friends with, or become friends with, or are intimate with participants, for example where conducting research on family members, identified three dimensions of ethics. The first was procedural ethics, such as those institutional processes discussed below, the second was what Ellis termed *"ethics in practice or situational ethics"* (Ellis 2007 p.4) which encompassed ethical decision making during data collection. This kind of ethical decision making in response to events during data collection might be synonymous with the kind of day to day ethical decision making that therapists are faced with in practice, the outcomes of which are, in part, determined by adherence to the profession's Code of Ethics and Professional Conduct (College of Occupational Therapists 2010a) and in part perhaps by something akin to an internalised ethics of care (Gilligan 1993, Gordon, Benner and Noddings 1996). Ellis's (2007) third ethical dimension was relational ethics again associated with ethics of care but focussing on responsibilities in the

ethical relationship between the researcher and the participant particularly where there are pre-existing and potential future relationships between researcher and participant. Ellis (2007) highlighted the need to recognise, respect and value the relationship between researcher and participant, their contexts of practice, connectedness and interpersonal bonds as well as dealing with the *"reality and practice of changing relationships with our research participants over time"* (Ellis 2007 p.4). Throughout the study this relational ethical dimension was of concern to the researcher. In contrast with the general presumption underpinning institutional ethical review that the participants are unknown to the researcher and there are no past, present or potentially future interactions between researcher and participants, in this study the majority of the participants were known to the researcher and it was a concern that both pre-existing and potentially future relationships would shape or influence the results and findings. Ellis (2007 p.5) states that *"as qualitative researchers, we encounter ethical situations that do not fit strictly under the procedures specified by Institutional Review Boards. The bad news is that there are no definitive rules or universal principles that can tell you precisely what to do in every situation or relationship you may encounter, other than the vague and generic "do no harm.""*. Ellis (2007) goes on to suggest that qualitative researchers with professional and personal relationships with their participants should seek to undertake research *with* their participants rather than conducting research *on* their participants. This particular ethical approach appealed to the author as a member of a healthcare profession that espouses working with patients and clients to meet their needs rather than doing things on, or to, or for, patients and clients. An example of consideration of this ethical dimension would be where it perhaps influenced the conduct of the semi-structured interviews in which participants were encouraged to reflect on their experiences and articulate these reflections for the researcher in order for both to learn.

Following the reflexive interview undertaken by the author in early 2011 another ethical concern was to be able to articulate the worth of the study. Ultimately the justification for undertaking the study, the study's worth, should be able to be articulated in terms of potential impact on

clients and patients of occupational therapists, otherwise the value and worth, and thereby the ethical integrity, of undertaking the study could be called into question. Tracy (2010) suggested a model for quality in qualitative research encompassing eight criteria or markers. Tracy's (2010) predominant concern in suggesting this model seems to have been pedagogical in that it grew from her experiences as a teacher of qualitative research methods to individuals new to the field and was suggested by her observation of their difficulty in processing the multiplicity of criteria for qualitative *"goodness"* (Tracy 2010 p.837). Tracy (2010) does go on to recognise that modelling qualitative quality is somewhat controversial and perhaps counterintuitive given the nature of qualitative research but justifies the development of her tool by reference to the typology of Dreyfus and Dreyfus (1986) who demonstrated that those new to a particular field rely on rule-based structures in order to learn. It could therefore be argued that Tracy's (2010) model provides the reader with little more than a glorified critical appraisal tool mainly of benefit to novice qualitative researchers. However, Tracy's (2010) indicators of worth within qualitative research studies included relevance, timeliness, significance, interest or evocativeness. The question of worth within qualitative studies is of course concurrent with and to some extent predicated by remaining questions over the worth of qualitative research itself. Hammersley (2007) suggested that the search for criteria demonstrating quality in qualitative research has been driven in more recent times by questions over the value of qualitative research in serving evidence based practice. He went on to discuss the attraction of models, such as Tracy's, to what he terms *"lay users"* (Hammersley 2007 p.290), that was consumers of research such as policymakers and practitioners who lack the expertise to judge quality in qualitative research. Hammersley (2007 p.289) was resistant to the establishment of criteria such as Tracy's (2010) referred to above, stating *"the task of judging quality in the context of a relatively complex activity like research cannot be sensibly reduced to the application of explicit, concrete and exhaustive indicators".* Hammersley (2007) favoured and suggested instead a form of guidelines

facilitating what might be seen to amount to critical thinking about the researcher's work, in that they would encompass Barnett's (1997) three forms of criticality;

- critical self-reflection, what Hammersley refers to as reflection on previous judgements that permits learning from experience;

- critical reason, Hammersley's learning from others and from across fields

- critical action; what Hammersley sees as the development of practice.

In choosing a qualitative research methodology to meet the aim of the study it was therefore essential to commit to critically analyse the ethics of the study from a variety of perspectives, to commit to the demonstration of ethical worth of the study by articulating the potential impact on patients and clients, perhaps by examining some of the factors suggested by Tracy (2010). Finally in order to demonstrate ethical quality, to commit to engagement in a reflexive meta-cognitive process encompassing consideration of self, relationship with others and relationship with practice. In practical terms the value of the reflexive interview (Appendix 11) in assisting the author to come to an acknowledgement of the critical importance of ethical practices, beyond those required for institutional approval, particularly where there were pre-existing relationships between researcher and participant, lay primarily in a renewed commitment to reflexivity in the processes of data gathering and analysis as detailed in Chapter 4. Secondly a critical examination of the rigour of the methodology and methods employed in the study as discussed below and in expanded upon in Chapter 5 would be vital in order to demonstrate the value and worth of the study to practitioners and ultimately, patients.

In addition, the commitment to reflexion permitted the author to examine his own epistemological perspectives, the assumptions and influences underpinning these and the potential for these to influence the methodology and methods adopted for the study. As an occupational therapist and occupational therapy educator the author would identify strongly with a constructivist epistemological perspective. As an occupational therapist and pertinently an occupational therapist with a strong interest in the interaction of individuals with their

surroundings, particularly the experience and health of people with disabilities; social constructivism, whereby disability and health are recognised as largely social constructs, would undoubtedly influence the author's worldview. Social constructivism has a strong relationship with phenomenology as interpreted by Heidegger and associated with the school of interpretative North American phenomenology characterised by the work of Schutz (Berger and Luckman 1966). The occupational therapy profession's primary concern with the promotion of health through engagement in occupations and the related professional meme of learning through doing, which is explored further below, links to educational constructivism, whereby the learner is an active participant in the educational process. As an occupational therapy educator the author has been a proponent of problem based learning and of work based practice education both associated with educational constructivism and the work of John Dewey (Dewey 2011). These understandings aided the author in appreciating that the ontological and epistemological assumptions underpinning the study would be primarily constructivist in nature.

3.4.2: Phenomenology

Researchers undertaking qualitative studies have a diverse choice of traditions of enquiry and sometimes these may be integrated or blended within a single study (Cresswell 1998). As such, it can be difficult for the novice researcher to definitively say what qualitative research is (Carpenter 2004). For Denzin and Lincoln (2000, cited in Carpenter 2004), qualitative research is a *"set of interpretive activities that has no theory or paradigm that is distinctly its own, nor does it privilege a single methodology over another. It draws upon and utilises a diversity of approaches, methods and techniques"* *"Qualitative researchers do however, share a similar world view, approaching the world with a set of ideas and values, a framework (theory, ontology) that specifies a set of questions (epistemology) that he or she then examines in specific ways (methodology, analysis)"* (Denzin and Lincoln 2000 p.18). However, as discussed above there is

currently a tension within the community of qualitative researchers between those who would aim to establish criteria for quality in qualitative research and those such as Denzin and Lincoln (2005) who, while recognising the drivers, question the imposition of positivist-like criteria within the qualitative research paradigm or paradigms.

Flick (2002) suggests that qualitative research shares four essential guiding features, firstly, the correct choice of methods and theories, secondly, the recognition and analysis of diverse perspectives of participants, thirdly, the researcher's reflexivity and finally the variety of approaches and methods. *"The goal of (qualitative) research is less to test the already well known (for example theories already formulated in advance) than to discover the new and to develop empirically grounded theories"* (Flick 2002 p.5).

Denzin and Lincoln (1998), while recognising that any attempt to define qualitative research requires analysis of the circumstances that produced the definition, (1998 p32) briefly define qualitative research as being *"multi-method in focus, involving an interpretive naturalistic approach to its subject matter"* (1998 p.3). Qualitative researchers are seen to use a variety of interconnected methods in an attempt to study phenomena in their natural setting and to interpret these phenomena in terms of the meanings people bring to them.

Denzin and Lincoln (1998) go on to highlight the many paradigms, strategies of enquiry, and methods of analysis that can be drawn upon in addition to new and evolving ways of looking at phenomena that are emerging. Indeed, Cresswell (1998) identifies 22 different qualitative traditions mentioned by authors from the social sciences. It is possible for researchers to attach a project to any of the qualitative traditions although the validity of the findings might be questioned if the context of the study and the reflexivity of the researcher are inappropriate.

Phenomenology is the study of phenomena: literally, appearances as opposed to reality (Woodruff-Smith 2003 p7). Although phenomenology has been practiced for centuries the

discipline flowered in the work of the classic phenomenologists Husserl, Heidegger, Sartre and Merleau-Ponty (Woodruff-Smith 2003) who shared a concern with the essence of human experience. There are currently numerous forms or interpretations of phenomenology and disagreement is evident in the literature about which is the true version (Finlay 2011). Denscombe (2007) suggests that there are two main types, one associated with the classical European version grounded in philosophy and the other North American version grounded in the social phenomenology of Alfred Schutz which is linked to the fields of sociology, psychology, education and health studies. The main concern of the North American approach is with the ways that people interpret social phenomena and it incorporates elements of pragmatism and social interactionism. It has been suggested (Barber 2010) that the disciplines of ethno-methodology, conversation analysis and discursive psychology are rooted in the work of Schutz. Discursive psychology studies human interactions and aims to permit understanding of events, processes and attitudes. In practice, the key characteristic of both phenomenological approaches to research is an emphasis on describing authentic experiences (Denscombe 2007). Finlay (2011) suggests that phenomenological methodologies can broadly be divided into two categories; descriptive, following in the tradition of Husserl, and hermeneutic; following in the tradition of Heidegger, while acknowledging that some contemporary methodological traditions do not fit comfortably within this categorisation.

A phenomenological research methodology has been adopted in a number of studies relevant to the proposed project. In particular it has been used in studies that have examined clinical reasoning, (Mattingly 1991, Ward 2003, Scheirton et al 2003), professional development (Finlay 2001, Tryssenaar and Perkins 2001) and the experiences of occupational therapy students preparing for practice on practice education placement (Meyers 1995, Lyons 1997, Whiteford and St-Clair 2002). Interestingly, although describing phenomenological research as their methodology, many of the authors adopted methods and tools that would attract criticism from European classicists (Giorgi 1997 cited in Webb and Kevern 2001). Some combined techniques

associated with phenomenological research within an action research project (Mattingly 1991), and others with ethnographic fieldwork (Finlay 2001, Lyons 1997, Ward 2003). Mattingly's work on clinical reasoning is particularly important in the occupational therapy literature. Mattingly herself is a social anthropologist, her work is deeply influenced by the work of Donald Schön and thereby John Dewey. It is therefore not surprising that her work would be in the North American tradition and incorporate elements of pragmatism and social interactionism.

Phenomenology is a qualitative research approach that focuses on the direct experience of humans; a focus which appeared to coalesce with the aim and focus of this study i.e. what were the experiences, perceptions, beliefs and attitudes of the new graduate practitioner, the supervisor and the manager and what understandings can the researcher bring to these experiences. At the core of phenomenological research are the ideas and reasoning of the people being studied (Denscombe 2007 p.78) and therefore *"phenomenology has an affinity with humanistic perspectives on research that are keen to accord normal people and their own everyday reasoning higher status in research".* Phenomenological research is suitable for small-scale projects that deal with complex phenomena and is used increasingly in healthcare research (Bowling and Ebrahim 2005). Sceptics highlight concerns about the subjectivity and descriptive nature of phenomenology and how generalisable the findings might be from potentially unrepresentative samples. It could be questioned whether generalisability of findings should be of concern in qualitative research but in an effort to address these concerns researchers from the North American, pragmatic, social interactionist school of phenomenology have begun to adopt "blended" (Cresswell 1998) qualitative research strategies that, although founded in phenomenology, permit an analytical process more akin to grounded theory. This too has resulted in some tension within the qualitative research methodology literature, with authors from the classicist European tradition such as Webb and Kevern (2001) raising concerns about the way that qualitative traditions of enquiry may be misrepresented in some research literature. As this study aimed to gain and analyse interpretations and establish understandings it inevitably

favoured the tradition of phenomenological enquiry based in the work of Heidegger. One approach in this tradition is Interpretative Phenomenological Analysis.

3.4.3: Interpretative Phenomenological Analysis.

Interpretative phenomenological analysis (IPA) is an approach to qualitative data analysis developed primarily in health psychology research (Smith, Flowers and Larkin 2009). It has been employed in studies of, for example, counselling and therapy, mental health service users, disability, genetics and sexuality, (Birkbeck University 2010). Although only originating in the mid 1990s, several hundred papers have now been published presenting empirical IPA studies (Smith 2011) and authors such as Clarke (2009) and Finlay (2011) commend IPA as a useful approach in occupational therapy research. Clarke (2009 p.37) makes this explicit in saying *"Using IPA, it is possible for occupational therapists to develop a deeper understanding of the experiences of ... colleagues, which in turn may facilitate reflection on current practices and lead to changes that enhance service provision".* Of relevance to this study, the approach has been used to investigate and analyse the thinking and reasoning of health professionals, (Harris and Lindsey 2002, Epstein and Ogden 2005). Smith and Eatough (2006 p.324) characterise the central concern of IPA as being *"provision of a detailed exploration of personal lived experiences as well as how participants make sense of them".* The data gathered in this study comprised textual transcripts of semistructured interviews. IPA has been used in similar studies and has been shown to deliver insights into practice and processes in this field, (Harris and Lindsey 2002, Epstein and Ogden 2005). Continental phenomenologists such as Giorgi (2010) have been critical of IPA as they suggest conflicts in the underpinning philosophies of phenomenology and science, (when phenomenology is employed by social scientists) result in deficiencies in methodological rigour. Giorgi (2010 p.6) suggests that *"Interpretive Experiential Analysis"* might be a better description of IPA and goes on to call for the *"articulation of a phenomenological theory of science".*

A systematic critical review of the use of IPA in health psychology (Brocki and Wearden 2006) concluded that the approach had proven to be particularly suited to health psychology research especially in investigating processes. Brocki and Wearden (2006) recommend that to ensure robust interpretation of findings, rigour and validity in studies incorporating this qualitative research methodology, various methods should be employed. These include rigour in the use of IPA which involves a process of close reading, summarising and examining the data for connections and associations, coding, clustering, abstraction and ranking of themes and interpretation.

Brocki and Wearden (2006) in their review of the use of IPA in health psychology express reservations regarding the limited reflexivity apparent in a proportion of the published papers that employ IPA and highlight that acknowledgement of analysts' preconceptions and beliefs may increase transparency. Finlay and Gough (2003) suggest that incorporating reflexivity into the research process helps to situate the research project and enhance understanding of the topic under investigation. Reflexive analysis was viewed as an essential component of this study and every effort was made to transparently situate the research within personal, interpersonal, institutional and cultural contexts. The validity of the researcher's interpretation and analysis was enhanced by asking participants to verify findings and through the supervision process whereby the researcher's analysis of the data gathered from the first two participants was independently audited by the supervisor (Smith, Flowers and Larkin 2009).

3.5: Method

3.5.1: Ethical Approval

Ethical approval was obtained by means of the process existent in the Robert Gordon University School of Health Sciences at the time the application was made. A research proposal was submitted to the School of Health Sciences Research Review Group and concurrently to the Robert Gordon University Commercialisation, Research and European Development Office (CREDO) for review, and approval for the study to go forward for external ethical review was obtained. An application for ethical approval was made to the North of Scotland Research Ethics Service (NoSRES) via the Integrated Research Application System (IRAS) and approval was granted subject to a number of minor amendments. Once complete the project was given a favourable ethical opinion by NoSRES and subsequently an application was made to NHS Grampian Research and Development again via IRAS. The project was registered and approval to conduct the study was obtained. At this time an NHS Grampian Occupational Therapy Service Lead was identified as the Local Collaborator and another Lead agreed to act as gatekeeper for the study. Following analysis of data gathered for phase 1 of the study and on discussion with the project supervisor, NosRES and NHSG R&D, it was decided that a substantial amendment to the study was required to encompass phases 2 and 3. The substantial amendment paperwork was submitted to NoSRES and NHSG R&D and ethical approval was granted for both phases.

3.5.2: Sampling

In each phase of the study purposive sampling was used to select therapists working across a range of settings within NHS Grampian. Purposive sampling is used in phenomenological research as participants have particular features, roles or characteristics that offer insights into the experience which the researcher wishes to study (Ritchie et al 2003, Carter and Henderson 2005). For practical reasons of geography, travel and cost and because of its representative mix

of community hospitals, teaching hospitals, community services, and rural and urban settings, the study was confined to services provided by NHS Grampian. Local Authority services were excluded as, until very recently, few new graduates were employed by local authorities and the same could be argued for the voluntary sector. Although the study could potentially have examined the experience of other graduate health professionals transitioning into practice, it was decided to concentrate on occupational therapists. As discussed in chapter 1 above, even within one profession, terms such as clinical reasoning are contested. To introduce graduates from medicine or nursing, for example, professions that may have different understandings, conceptualisations or meanings attached to the terms under consideration might potentially have influenced the validity of the findings. Professor Jonathan Smith of Birkbeck University of London, the original developer, writing on Interpretive Phenomenological Analysis (IPA), (Smith, Flowers and Larkin 2009) suggests that in studies that adopt IPA, samples should be selected purposively *"because they can offer a research project insight into a particular experience"* (Smith, Flowers and Larkin 2009 p.48). A wide selection of examples of published, peer reviewed literature is listed on the Birkbeck University of London IPA website (Birkbeck University of London 2010). Purposive sampling strategies predominate within this literature. Authors appear to tightly define the inclusion and exclusion criteria in order to obtain a sample of participants exhibiting exactly the characteristics they wish to investigate.

The participants in this study were occupational therapists employed by NHS Grampian. The first phase of the study examined the experiences of new graduate, band five occupational therapists who had been employed by NHS Grampian in the two years preceding the commencement of data collection. Phase two looked at the experiences of those providing direct supervision to a new graduate occupational therapist and the third phase at therapists with a managerial or strategic interest in the recruitment, development and retention of new graduate occupational therapists. All of the participants were health professionals registered with the Health

Professions Council as a condition of practice and were therefore known to be capable of giving informed consent.

The phase 1 sample size was dependent on a pool of new occupational therapy graduates entering employment with NHS Grampian during 2007, 2008 and 2009. Based on 2006-on figures this pool was anticipated to comprise approximately 15 potential participants from which to draw for phase one of the study. In the event, due to NHS Grampian's moratorium on hiring new staff for a considerable time during the data collection period, this pool was much smaller than anticipated. The rationale for selecting supervisors for the second phase of the study and subsequently managers for phase three emerged due understandings gained in the preceding phases. Primarily this decision was influenced by the emerging evidence from phase one interviews of the critical importance of these two separate groups in ensuring a successful transition into practice. Access to participants in each phase of the study was facilitated by the occupational therapy managers group and managed by the study gatekeeper, a Head of Service. The characteristics of the sample are described in Chapter 4.

3.5.3: Data Gathering Tool

For each of the phases of the study data were gathered by means of semi-structured interviews (Appendices 3 and 4). The interview was developed for the study and itself developed during the study, based on the phase of the study and learning from and reflection on previous phases. Smith, Flowers and Larkin (2009) reviewed the data gathering processes that have been utilised in published studies incorporating an IPA methodology. Smith, Flowers and Larkin (2009) suggest that, along with diaries, which in fact have only been employed in a very few studies, conducted by Smith himself, the best means of accessing the rich, detailed first person accounts on which IPA relies is the in-depth interview. While asking the participants to keep a reflective diary might have been considered in this study or in future studies of therapists transitioning into

employment, the act of keeping a reflective diary or log for the purposes of research in itself would undoubtedly impact on the participants' thinking and reasoning, a potential form of reactivity.

Other methods of data gathering were considered, for example early in the study the use of a focus group was proposed and rejected. This was based on the experience of the researcher in gathering data on Preceptorship. While a focus group might have allowed access to social norms within, for example, a group of experienced supervisors, group dynamics might have denied the researcher the opportunity to access the experiences of members perhaps lacking confidence in speaking in front of their peers or feeling in some other way inhibited. As the first phase of the study was examining individuals who might be fairly new to an organisation or group within that organisation, it was recognised that they might exhibit exactly these characteristics, be guarded in their focus group interactions or in some other way be inhibited in sharing experiences with the group and thereby with the researchers.

Other methods such as postal questionnaires, email conversations or computer mediated interviewing, identified by Smith, Flowers and Larkin (2009), were rejected as they either involved a loss of spontaneity and non-verbal communication on which pertinent supplementary questions might be based or there were technological barriers such as contemporary NHS IT security firewalls (computer mediated interviewing) which would have made data gathering a complex technological exercise if not completely impractical.

Smith, Flowers and Larkin (2009 p.57) summarised the advantages of semi-structured one-to-one interviews as the preferred method of gathering data in IPA studies thus:

"In IPA ... we are aiming to design data collection events which elicit detailed stories, thoughts and feelings from the participant. Semi-structured one-to-one interviews have tended to be the preferred means for collecting such data. One-to-one interviews are easily managed, allowing a rapport to be developed and giving participants the space to think speak and be heard. They are therefore well-suited to in-depth and personal discussion".

They go on to say:

"Interviewing allows the researcher and participant to engage in dialogue whereby initial questions are modified in the light of participants' responses and the investigator is able to enquire after any other interesting areas which arise" (Smith, Flowers and Larkin 2009 p.57)

This describes exactly the desired data gathering interaction intended in pursuit of the fulfilment of the aims of this study. Smith, Flowers and Larkin (2009) views on semi-structured in-depth interviews as being the most suitable means of data gathering in IPA studies are supported by Reid, Flowers and Larkin (2005 p.22) who state

"The chosen method for much qualitative data collection is a semi-structured interview. IPA researchers are aware that interviews are not 'neutral' means of data collection. The interviewer is understood to work with the respondent in flexible collaboration, to identify and interpret the relevant meanings that are used to make sense of the topic".

This reflects to some extent the desire expressed in section 3.4.1 Ethics, Reflexivity and Philosophy, above, that ethically, because of the pre-existing relationships between researcher and participants, data collection should be a joint learning experience. Support for Smith, Flowers and Larkin's (2009) view also comes from the reality that most published IPA studies have reported employing this method of data collection (Birkbeck 2010, Smith 2011).

The semi-structured interviews used in this study were developed from themes generated by consideration of the research question, the aim and objectives, identified gaps in the literature or where there were conflicts or the literature was outdated and in discussion with the research supervisor. If the aim of the research, stated above, was to be broken down, the questions that the study was aiming to answer could be articulated as:

> What are the critical thinking and clinical reasoning skills that occupational therapy graduates employ as newly autonomous practitioners?
>
> Why do newly autonomous practitioners use these particular skills?

How are critical thinking and clinical reasoning applied in practice by newly autonomous practitioners?

How well prepared were the new graduates for entering practice in terms of their clinical reasoning and critical thinking?

How are critical thinking and clinical reasoning developed during the first two years of practice and what are the contributing factors, either facilitating or inhibiting development?

Do the critical thinking and clinical reasoning skills demonstrated by new graduates meet the needs of clinical practice and expectations of employers?

From consideration of the research aim and derived questions a number of themes were developed for the study. As discussed below, the phases, and indeed individual interviews within phases, were informed by the preceding interviews as per suggested IPA methodology (Smith, Flowers and Larkin 2009) but each encompassed the following themes as a minimum:

- Knowledge of critical thinking and clinical reasoning.

- Experience of using critical thinking and clinical reasoning.

- Examples of where critical thinking and clinical reasoning have been used.

- Development of critical thinking and clinical reasoning.

- Barriers (*to employing both critical thinking and clinical reasoning*).

- Reflections on transition (*from new graduate to competent therapist*).

In addition the semi-structured interviews gathered demographic details such as time and experience since qualification as an OT, participation in induction schemes.

From these themes a topic guide for phase one of the study, incorporating indicative open questions was developed by the researcher. On discussion with the principal supervisor this topic guide appeared to have reasonable face validity. (Appendices 3 and 4). An attempt was made to establish the construct validity and content validity of the topic guide by the process of

both supervisor and researcher close reading the transcriptions of the first two interviews. This process is supported by Smith, Flowers and Larkin (2009 p.184) who describe the supervisor conducting *"mini audits"* of the student's work and suggest that audit is a powerful tool in establishing validity in qualitative studies.

The first phase of the study informed the subsequent phases and, although each phase encompassed the themes identified above, the topic guides were altered to reflect the bands of the participants (Appendices 3 and 4), phase 2 concentrating on the supervision experience and phase 3 more on the experience of managing new graduates from a strategic and operational perspective. The topic guide was constructed so that the brief section containing demographic questions was covered first; there was an opening open question which could mainly be answered descriptively, a transition question which asked for fairly straightforward analysis then a series of prompts covering the respective topics, which the interviewer could use flexibly. Finally there was a relatively light-hearted closing question which allowed the participant to summarise the major themes from the interview and package them as a piece of advice to pass on to others. The researcher, an experienced interviewer, asked supplementary probing questions as necessary and offered clarification as required. One feature of the semi-structured interviews was the use of word clouds. These were developed by the researcher in response to the understanding that there was some complexity in the ideas under consideration and in the language used to articulate these ideas. In part these word clouds were used to reduce the verbal input from the interviewer, reducing the possibility of introducing cues and potentially respondent or interviewer bias. The development of the word clouds came from the author's observation of early examples of what have come to be known as tag clouds or text clouds. Word clouds have been used in qualitative research to permit a rapid visual understanding of information, (McNaught and Lam 2010) and are frequently used in social software. Unlike the contemporary word clouds used in social software, there was no attempt to scale or cluster the words used in the word clouds for this study. Three word clouds (Appendix 5) were simply terms

associated with critical thinking, barriers to critical thinking and clinical reasoning enclosed randomly in a cloud shape. The intention was to avoid any kind of hierarchy or list or attach any value to the terms that could be selected for discussion. The cloud shape was chosen for its fuzziness, the lack of structure and transitory shape of clouds, the intention being to communicate that there was nothing hard or fast in the terms chosen. The participants were encouraged to add or take away terms as they pleased during the course of addressing the relevant questions. Where words were added by participants these were added to the word clouds for subsequent interviews. No participants chose to remove words. The final word cloud reproduced Barnett's (1997) model of the three domains of critical thinking in cloud form. Again the idea of lack of geometric structure appealed given the nature of the questions. It was important that the three domains did not appear to be given equal weighting, as in the original model, as the questions allowed the participant to prioritise which domain they addressed first and which they spent most time discussing. Since this study was devised, blogs and online forums use a different style of "word cloud" almost as a form of appendix cum contents page cum abstract to indicate the terms used in the blog and their relatively frequency of use within the blog.

The way that the interviews were constructed, the number of topics and their order of presentation reflected the advice of Smith , Flowers and Larkin (2009, 60) in designing data gathering tools for IPA research although the author is not aware of any other studies employing word clouds. Other authors have supported aspects of this method of gathering data. Creswell (1998), for example, states that in phenomenological studies the primary process of collecting information is the in-depth interview. Willig (2008 p.23) concurs, stating *"semi-structured interviewing is the most widely used method of data collection in qualitative research in psychology"*. However Willig (2008) does go on to caution against taking the data gathered by means of semi-structured interview at face value without consideration of contextual factors. Although not quite so explicitly stated, Silverman (2005) supports this view by suggesting that

what happens during data gathering (i.e. the data gathering context), is itself a source of data.

Silverman (2005) raises a number of other methodological concerns regarding semi-structured

interviews, one of which is reflected in the consideration of ethics in section 3.4.1 Ethics,

Reflexivity and Philosophy. Silverman (2005 p.45) highlights that the researcher needs to address

the question of whether *"the interview responses are to be treated as giving direct access to

experience or as actively constructed narratives".* This is because participants may attach

multiple meanings to their experiences dependent on the context and their audience. The

construction of narratives is recognised as a two-way process between interviewer and

participant. As is clear from section 3.4.1 above it is the position of this study that the interview

process involved a jointly constructed narrative.

Also as identified above, the early interviews informed subsequent interviews and the first phase

of the study informed the subsequent phases. Each phase encompassed the themes identified

above. However, the topic guides were altered to reflect the bands of the participants and the

understandings developed from the preceding interviews. In phase one the critical importance of

the relationship between new graduate and supervisor became evident and the topic guide for

phase two reflected this, facilitating discussions on successful supervision, developing skills,

knowledge and capability in new graduates and barriers to supervision. Training in and managing

clinical supervision emerged as a topic from phase two and was incorporated into the phase

three topic guide along with discussions on readiness for practice and criteria used when making

employment decisions which emerged from the phase one interviews.

3.5.4: Data Gathering Process

Table 7: The steps in the data gathering process

STEP	ACTION
1	The researcher provided the gatekeeper with a copy of the information sheet and discussed the inclusion criteria for the particular phase of the study
2	The researcher provided the gatekeeper with packs each containing a copy of the study information sheet (Appendix 6), an agreement form (Appendix 7) and a stamped addressed envelope, addressed to the researcher.
3	The gatekeeper distributed the packs to potential participants within their service who met the criteria for inclusion in the particular phase of the study
4	Potential participants read the information sheet, elected whether or not to participate in the study and returned their signed agreement form in the stamped, addressed envelope.
5	If the potential participant returned the agreement form declining to take part in the study, no further contact was made by the researcher. If the potential participant agreed to being contacted about the study the researcher established contact by telephone or email at the potential participant's place of work, whichever was indicated on the agreement form, and agreed a mutually convenient time for the semi-structured interview to take place and a location within the potential participant's worksite where privacy was ensured.
6	The researcher visited the potential participant at the pre-arranged time, ensured awareness of both researcher and potential participant regarding evacuation and any other health and safety procedures, identified that the room used for the interview was in use, and ensured that another member of staff was aware that the interview was taking place.
7	The researcher and potential participant reviewed the study information sheet and any questions that the potential participant had were addressed. In addition to reading the information sheet, during this review the potential participant was informed verbally about their right to withdraw from the study at any time, anonymity, confidentiality, audio-recording and transcription, security and storage of data. If the potential participant was happy to consent to participate in the study, the informed consent form (Appendix 8) was completed and signed by both researcher and participant.

8	On completion of the informed consent process, data collection in the form of a semi-structured interview (Appendices 3 and 4) was conducted by the researcher. The interviews were recorded by means of a digital audio-recording device. Mobile phones and pagers were switched off as they interfered with audio-recording, recording levels were checked to ensure a usable audio-file was being produced.
9	On completion of the semi-structured interview the recording device was switched off and the participant was informed that recording had ceased, thanked for participating in the interview and details of the participant transcript checking process were confirmed.
10	The participant was allocated a number and name to ensure anonymity during the analysis and write up. Participants in phase one of the study were numbered 51 - 57, 5 for their band and 1-7 for their order of participation. Phase 2 participants were numbered similarly; 61 – 67 and phase 3; 71-76. Names were generated at random from a list of students unconnected with the study. The audio-recording of the semi-structured interview was transcribed verbatim and checked for accuracy by the researcher. A hard copy of the verbatim transcript was sent to the participant for checking, correction and comment.
11	On completion of data analysis the preliminary findings were summarised and sent to all participants via e-mail for comment and verification.
12	As necessary, second, brief contacts were made with participants to clarify issues that arose during data analysis or verification.
13	The researcher participated in an audio-recorded reflexive interview with an experienced peer researcher from out with the supervisory team, the data transcribed from this interview contributed to the reflexive understanding inherent in the study.
14	The researcher kept contemporaneous notes, memos and emails which again contributed to the reflexive understanding inherent in the study.

3.5.5: Data Analysis Process.

Data Analysis was broadly concurrent with data gathering and followed guidelines discussed in the IPA literature (Smith, Flowers and Larkin's 2009, Smith and Eatough 2006, Smith and Osborn 2008). As discussed above IPA encourages an inductive approach and this is particularly true in data analysis where ideas and themes emerge from personal narratives and experiences. Clarke (2009 p.39) describes the process of data analysis in IPA thus: *"The approach adopts both emic*

(insider) and etic (interpretative, outsider) positions. The emic position enables the researcher to hear and understand the participant's story and place his or her experiences at the centre of the account. Adopting the etic position involves the researcher trying to make sense of the data by bringing in his or her own interpretations and theoretical ideas, but using verbatim quotes to ground these interpretations in the participant's actual experience".

In addition to Smith's published guidelines (Smith, Flowers and Larkin 2009, Smith and Eatough 2006, Smith and Osborn 2008), The Interpretative Phenomenological Analysis Research Interest Group (2010) an online community of researchers engaged in IPA research has published a flow diagram, (Figure 3) reproduced below which guides the researcher through the steps of data analysis. This differs a little in detail from Smith, Flowers and Larkin's (2009) suggested 6-stage data analysis procedure. However Smith, Flowers and Larkin (2009 p.79) argue that *"The existing literature on analysis in IPA has not prescribed a single 'method' for working with data. Indeed, many methods chapters and published papers have been characterized by a healthy flexibility in matters of analytic development".*

This study initially followed Smith, Flowers and Larkin's (2009) step by step guide to analysis (Table 8) which was adapted specifically for this study. Smith, Flowers and Larkin (2009) suggest that for the novice researcher this guide provides structure, increasing confidence and competence in conducting IPA analysis. Smith, Flowers and Larkin (2009) suggest that data analysis is best done using hard copies, the method employed in this study following a speculative attempt to use qualitative data analysis software, which unfortunately proved to be inappropriate given the depth of analysis required by the IPA methodology adopted.

Table 8: Steps in IPA Data Analysis (Smith, Flowers and Larkin 2009)

Step	Description	Components	Suggested Strategies
1	Reading and re-reading		Immersion in the data
			Active engagement
			Understanding the structure
2	Initial noting		Exploration
			Free textual analysis
			Awareness of researcher bias
		Descriptive comments	Key words, phrases, explanations
		Linguistic comments	Language use, repetition, tone
			Fluency
			Non-verbal content
			Metaphors
		Conceptual comments	Interrogative, questioning
			Understandings
			Personal reflection (analyst)
			Interpretation
			Deconstruction
3	Developing emergent themes		Working with notes rather than data
			Look for themes
			Reduce detail / maintain complexity
			Analyst takes central role
			Capture and reflect understanding

4	Searching for connections across emergent themes	Abstraction	Identify patterns Super-ordinate themes
		Subsumption	Emergent to super-ordinate themes
		Polarization	Oppositional themes
		Contextualization	Contextual or narrative elements
		Numeration	Frequencies
		Function	Themes have a function for the participant (position)
5	Moving to the next case		Treat each case on its own terms Bracketing of ideas
6	Looking for patterns across cases.		Connections Re-label and reconfigure Higher order concepts
7	Deeper interpretation		Move from whole back to part Illuminate arguments

Figure 3: Comparison of present study with IPA data analysis steps (Interpretative Phenomenological Analysis Research Interest Group [IPARIG] 2010)

	IPARIG Steps	Present Study
1	Look for themes in the first case	
2	Read the transcript through several times. The left hand margin of the text is used to annotate what is interesting or significant about what the person said. Include language, contradictions, echoes in speech, associations, paraphrasing, questions summary statements, initial thoughts	Convert audiofile to MP3 on password protected player. Familiarise with transcript Hardcopy – annotate: first impressions, inflections, fast & dirty analysis, reflexive analysis
3	Identify and label themes that characterise each section of text in the right hand margin. These may use psychological terminology; check threads back to original text, and grounded in what specifically said. Use same theme titles if come up more than once	Modify transcript Word files to three columns, emergent themes developed from research aim, objectives and questions, grounded in data, additional themes emerge from transcript.
4	Connecting the themes: emerging themes are listed on paper and connections between them are sought. Order initially chronological but then clustered together. Look for subordinate concepts, check back to original to make sure connections work with primary material. Clusters are labelled either with descriptive labels of in vivo terms, using quotes.	Emerging Themes listed as with descriptive labels and added to Word file thematic analysis document Linkage between themes examined, clusters begin to emerge
5	Producing a summary table: Of structured subordinate themes, themes, quotations, page numbers and line numbers. Grouped under the clusters that emerge. Only include those that are related to the phenomenon under investigation.	Compilation of all coded materials grouped in themes, developing abstracted themes conceptual framework
6	Continuing the analysis with other cases	Interview 2 and on
7	Either use the summary themes from the initial transcript and look for themes or start from scratch on transcript 2. Whichever way recognise converging and diverging data, how themes are similar but also different between participants.	Use summary themes from interview 1, look for emergent themes, add these emergent themes. Code to abstracted themes analysis framework
8	Compose a list of the master themes that reflect the experiences of the groups as a whole. Ensure cyclic process; emerging themes are checked with raw data Analysis continues until the point that all themes have been integrated. If new subordinate theme emerges can analyse data in light of this new theme.	Code interviews from each individual phase to abstracted themes framework Double hermeneutic – making sense of making sense Examine themes developed from the group looking for emerging master themes, revisit data to verify master themes.
9	Writing up: All themes are moved to writing up, and expanded. Translate themes into narrative account with verbatim extracts. Clearly identify what was said and the researcher's interpretation. Can be supported by a table of themes or the relationship between themes.	Write up Evidence double hermeneutic Data analysis tables in Chapter 4 demonstrate analytical process.

3.5.6: Reflexion.

IPA analysis involves a process of close reading, summarising and examining the data for connections and associations, coding, clustering, abstraction and ranking of themes and interpretation. A systematic critical review of the use of IPA in health psychology (Brocki and Wearden 2006) expressed reservations regarding the limited reflexivity apparent in a proportion of the published papers that employ IPA and highlighted that acknowledgement of analysts' preconceptions and beliefs may increase transparency. Reflexivity, while remaining something of a contested term (Finlay and Gough 2003), has been conceptualised as something akin to self awareness of, for example, context or personal beliefs, on the part of the researcher and in particular self-awareness and acknowledgement of the researcher as an active agent in the research process (Etherington 2004). Finlay and Gough (2003) suggest that incorporating reflexivity into the research process helps to situate the research project and enhance understanding of the topic under investigation. Ethically, reflexive analysis was viewed by the researcher as an essential component of this study and every effort was made to transparently situate the research within personal, interpersonal, institutional and cultural contexts. Appendix 9 illustrates the relationships between study participants where these existed. A research log detailing the researcher's thoughts and understandings in the period leading up to and during data collection and analysis formed the basis for the reflexive accounts (Ballinger 2003). Etherington (2004) suggests that a reflexive research log permits a qualitative researcher to capture their changing and developing understanding of method and content. The second source of reflexive stimuli was the contemporaneous memos and emails exchanged between the researcher, supervisor and other agencies. Thirdly the researcher underwent a reflexive interview with a peer researcher whose questions allowed the researcher to articulate personal biases in fieldwork approach and method and to look for alternative ways of looking at, in particular, the ethical dimensions of the study. The validity of the researcher's interpretation and analysis was perhaps enhanced by asking participants to verify findings and through the

supervision process whereby the researcher's analysis of the data gathered from the first two participants was independently audited by the supervisor (Smith, Flowers and Larkin 2009).

3.6: Summary

In summary, this project adopted an approach from within the qualitative paradigm; interpretive phenomenological analysis, this approach informed the methods adopted throughout the study. Of critical importance in establishing the method of data collection and analysis was consideration of the ethics of the study, in particular because many of the subjects were peers and former students of the researcher, and reflexivity, in design and conduct of the study and analysis of the data. The commitment to reflexivity permitted exploration of the researcher's personal and professional beliefs and understandings, the context of the data collection and analysis, and the intra-professional socio-cultural norms common to both researcher and participants.

Chapter 4: Analysis and Findings

4.1 Introduction

This chapter initially explores the process of data analysis. It goes on to detail the development of emergent, abstracted and super-ordinate themes from the raw transcripts of the participant interviews. These super-ordinate themes are then presented in three separate sections corresponding to each phase of the study. The subsequent section concludes the chapter by examining the convergences and divergences in the findings of the preceding three sections before understandings and interpretations gained from the study are discussed within the context of the wider body of published research and arguments are developed in chapter 5.

Throughout the chapter excerpts of raw data are used, firstly short excerpts to illustrate the process of coding and analysis and subsequently somewhat longer quotations to demonstrate that the analysis of the findings in each of the three phases is grounded in the data. The names of the study participants have been changed to protect their anonymity and maintain confidentiality. Pseudonyms used to refer to the participants were generated at random from lists of student names not linked to the participants. The names of the hospitals and units that the participants worked in have been omitted and where the participants held a relatively unique post further anonymisation has been undertaken to ensure individual participants cannot be identified. A brief description of the participants in table form is included in the introduction to each of the study phase sections.

Throughout the sections of this chapter the author acknowledges that his assumptions attitudes and cognitive biases had the potential to influence both the coding, analysis and interpretation of the data. *"Reflexivity is the term used for explicit consideration of specific ways in which it is likely that the study was influenced by the researcher"* (Yardley 2008 p.250) and is thought to add to

the transparency and thereby validity of qualitative research studies. Where appropriate, the author's reflexivity will be incorporated into the account to make it transparent to the reader how the author's background and dispositions could have influenced the interpretations extrapolated from the data. The author, who conducted all of the interviews for the study, had pre-existing professional relationships with a number of the participants in the study and these are indicated in the tables opening each section of the phases. In addition the author is male and the participants were all female, working in a predominantly (93-95%) female profession (Miller 1992). This perhaps impacted, for example, where participants were hesitant in describing conflicts with male members of the MDT, although gender conflicts were implied. The next section contains a detailed description of the process of data analysis to allow the coding structure and subsequent levels of analysis to be understood.

4.2 Analysis Methods

Each participant interview was audio recorded and transcribed verbatim using a method suggested by Holton-Salway (2008). The audio recordings were transferred to a password protected MP3 player to allow the researcher listen to the recordings in private and to become familiar with the content as well as speech inflections in the participants' accounts. Transcripts were read and re-read. An initial *"quick and dirty"* (Smith, Flowers and Larkin 2009 p.82) analysis using pen and paper was undertaken with the first two transcripts. Smith, Flowers and Larkin (2009) suggest that this initial brief analysis permits the researcher to temporarily bracket off the observations that confirm or talk to the researcher's own preconceived ideas and intuitive biases thereby improving focus on the data during subsequent analytical steps. This initial analysis was discussed with the principal supervisor and examined for cognitive biases, assumptions and understandings. At this point the researcher participated in a one hour reflexive interview with a peer researcher (91 Alan) who had recently completed his doctoral studies and was

knowledgeable in qualitative research methodologies. This reflexive interview was audio recorded and transcribed. Understandings gained from this reflexive process informed further data analysis.

NVIVO9, a qualitative research software programme was used to store data and some initial coding was done using the programme. However it was determined after analysis of three transcripts that it did not permit sufficient interrogation of the data and this analysis was scrapped in favour of an analysis using MSWord. There is considerable debate within the IPA community about the value of computer assisted qualitative data analysis software (CAQDAS) such as NVIVO. Some of this debate can be found on the IPA forum list serve (http://groups.yahoo.com/group/ipanalysis/). Reservations regarding the use of CAQDAS in IPA studies centre on lack of analytical rigour and shortcutting. Spencer, Ritchie and O'Connor (2003) highlight that using CAQDAS does not give the researcher output packaged in such a way that it is ready for analytical commentary and that, rather than being used for data analysis, it may be better thought of as analytical support for data administration and archiving. A number of contributors to the listserve as well as Smith, Flowers and Larkin (2009) support the three column MSWord method eventually employed by the author for all participant interviews. NVIVO was used by the researcher as a store for demographic data, interview transcripts, audiofiles and notes.

The transcript of the first interview (51 Ruth) was subjected to close reading and re-reading. The transcript was arranged into the right hand column of a three column MSWord table in landscape layout. Using the MSWord review tab, numbered notes were added to the right margin of the transcript. In the case of 51 Ruth and each of the first transcripts analysed in the subsequent two phases, this almost took the form of a free textual analysis (figure 4).

Figure 4. Extract illustrating the method of initial analysis of 51 Ruth's transcript.

On completion of the first pass analysis of 51 Ruth's transcript, a second analysis was undertaken whereby the notes extracted during the first analysis were grouped into emergent themes in the left hand column of the table as illustrated in Figure 5 below. The development of these emergent themes represented the beginnings of understanding and interpretation.

Figure 5. Extract illustrating the method adopted to develop emergent themes from 51 Ruth's transcript.

The emergent themes from the second analysis were organised into a further table, examined for relationships, any commonality and connections in the data and 15 abstracted themes were developed. Some of the abstracted themes reflected observations drawn from the initial *"quick and dirty"* pen and paper analysis and some did not. The abstracted themes were organised into a coding table. The second interview transcript (52 Faye) was analysed using a similar method although the abstracted themes generated from 51 Ruth's transcript were used during the

second, left hand column, analysis and new themes that emerged were added to the coding table.   At this point the first two transcripts and analysis were returned to the principal supervisor for checking and feedback on the coding process, accuracy and integrity.   Following discussion, four of the remaining five phase 1 interview transcripts were analysed. It was decided at this point that the transcript of the interview with participant 53 would not be included in the data analysis. The reasoning behind this decision is discussed further in section 5.2.5, limitations, below. In summary, participant 53 did not meet the criteria for inclusion in the study, which only became apparent during the interview and analysis process. New coding themes emerged in the analysis of the transcripts of 54 Jane and 55 Helen. No new coding themes emerged from the transcripts of 56 Mary or 57 Lyn suggesting that, within this sample, perhaps data saturation had been reached for the first phase of interviews. The coded transcripts, abstracted themes and an overview summary of all six participant interviews was prepared and forwarded to the principal supervisor for discussion and feedback. The same process was followed for analysis of the phase 2 and phase 3 interview transcripts, starting with a free textual analysis of the first participant interview and building on that through the remaining six interviews for phase 2 and five interviews for phase 3. On completion of the coding of the phase 1 interviews, nineteen themes had been abstracted (Appendix 10). For phase 2 there were fifteen themes and for phase 3 there were thirteen themes (Appendix 10). The frequencies with which each of these themes arose in each individual interview was recorded to ensure that they were arising in more than one interview.   The themes were examined and through a process whereby some themes were subsumed into others and the polarization of other themes was recognised, the super-ordinate themes discussed in sections 4.5 – 4.7 below were identified.

4.3: Sample of Analysis

In order to make explicit the process discussed in section 4.2 above a section of the transcript from the interview with 67 Lara will be deconstructed, the analysis and coding explained in terms of the emergent, abstracted and super-ordinate themes. In this passage 67 Lara was reflecting on a situation where she was recently employed as Head of Service in a large hospital in England, managing approximately 86 members of occupational therapy staff including new graduates.

67 Lara:

"It was far too risky um… so I suppose that was really the start of it and that was…not incidents in terms of anything went wrong but just staff, real staff morale issues and difficulties with understanding the role of occupational therapists when that was your client group and you were just left to get on with it day in day out. And so…as a service that's what we decided to do"

The components of the passage were initially coded as per table 9, using MSWord comments. The notes composed primarily questions but also relate to the understandings generated from previous interviews 67 Lara's own words or the perceived underlying emotion. From previous interviews there was an awareness that anytime a participant referred to a service or team with which they identified (point 5) this was almost invariably the occupational therapy team as opposed to a multidisciplinary or interdisciplinary team. This understanding was confirmed later in the interview by 67 Lara. Points 3 and 4 were related to 67 Lara's words and implied feelings; Overwhelmed came from the never-ending nature of day after day role confusion and low morale. Points 1 and 2 related to an emergent theme which subsequently went on to become a super-ordinate theme for phase 2, which was risk versus autonomy. Here 67 Lara was talking about becoming responsible for band 5s in risky complex settings. Initially my question was about whether there was a risk to the patients, which there was although this was never realised, but also the risk to the staff member in terms of their morale and professional development,

which evidently was being realised resulting in band 5 therapists being withdrawn from that part of the hospital. The notes were coded as below (Table 10).

Table 9: Sample analysis 1.

	Components of 67 Lara's account	Analysis Notes
1	"far too risky um…so I suppose that was really the start of it"	Risk from patients or from staff with limited competence / capability? – start of (67 Lara) supervising band 5s
2	"not incidents"	Risk to patients not realised but risk to morale of new staff appears to have been realised – stress on new staff
3	"morale issues"	Low morale from feeling overwhelmed?
4	in terms of anything went wrong but just staff, real staff morale issues and difficulties with understanding the role of occupational therapists when that was your client group and you were just left to get on with it day in day out.	Role confusion in young therapists? Morale issues in young therapists?
5	"a service"	OT team?

On abstraction these were coded to one of the fifteen phase 2 abstracted themes (Appendix 10). Points 1 and 2 were coded to "Supervisor Confidence: Autonomy vs. Risk". Points 3 and 4 were coded to "Anxiety/Transition" and point 5 was coded to "Supporting Band 5s". Further consolidation of the abstracted themes into super-ordinate themes resulted in "Supervisor Confidence: Autonomy versus Risk" being subsumed into "Autonomy versus Risk". "Anxiety/Transition" and "Supporting Band 5s were both subsumed into the super-ordinate theme "Support for Competence vs. Anxiety". These super-ordinate themes are discussed in section 4.6 below.

Table 10: Sample analysis 2.

	Analysis Notes	Emergent Theme Coding
1	Risk from patients or from staff with limited competence / capability? – start of (67 Lara) supervising band 5s	Risk vs. autonomy
2	Risk to patients not realised but risk to morale of new staff appears to have been realised – stress on new staff	Risk – anxiety (but unclear if risk is to or from new staff or both)
3	Low morale from feeling overwhelmed?	Morale is low in new grads if feeling overwhelmed
4	Role confusion in young therapists? Morale issues in young therapists?	Role confusion in young therapists
5	OT team?	Service – OT team?

4.4: Presentation of the Findings

Sections 4.5, 4.6 and 4.7 present the findings from the three phases of the study. Within the introduction to each theme there is a table of demographic data to permit the reader to understand something of the characteristics of the participants. Each of the three sections is further divided into parts, each part pertaining to a super-ordinate theme. The super-ordinate themes were generated by the process of data analysis described above and there are four in section 4.5, three in section 4.6 and four in section 4.7. Sections 4.6 and 4.7 share two themes about supporting band 5 therapists' competence and capability but the first is from the perspective of a clinical supervisor and the second from the perspective of a service manager. Each part opens with a diagrammatic representation of the abstracted themes subsumed into the respective super-ordinate theme. While some of the abstracted sub-themes are discussed in detail others are perhaps less so where they do not fully reflect the aims or address the primary questions posed by the study or where the frequencies indicate that they reflect the experiences

of relatively few participants. It is recognised that there are significant areas of overlap within themes. Throughout these sections verbatim quotations from the transcripts have been used to illustrate participants' experiences, perceptions, expectations and understandings and to demonstrate that the analysis and the researcher's interpretations remain rooted in the data. Section 4.8 summarises the convergences and divergences in the preceding three sections.

Section 4.5: Phase 1, The Band 5 Occupational Therapists

"I feel that I, my thinking skills, my confidence, everything has really grown from starting work and that's really when I've started learning"

52 Faye, a Band 5 occupational therapist and study participant.

In this section the findings from the analysis of the interviews conducted with the participants included in phase 1 of the study are presented. Smith, Flowers and Larkin (2009 p.109) state that:

"the results section of an IPA write-up is much more substantial and much more discursive than the results section of a typical quantitative report. A large proportion is constituted by transcript extracts whilst the remainder is your detailed analytic interpretations of the text. Your purpose here is twofold: you need to give an account of your data, to communicate a sense of what the data are like, and you need to offer an interpretation of your data, to make a case for what they all mean".

In achieving this, the author remains conscious of the double hermeneutic nature of IPA, (Smith and Osborn 2007) whereby the participant is making sense or interpreting their particular situation while concurrently the researcher is making sense of or interpreting the participant's interpretations.

Table 11 below summarises the characteristics of the six participants in phase 1 of the study and the nature of any relationship with the researcher. All were female and ranged in ages between 22 and 32 (median = 23.5). The two older participants had completed postgraduate pre-

registration occupational therapy courses and the two participants with the longest experience (2 years) had each held 4 posts during that time, which was quite surprising.

The section is constructed around four super-ordinate themes, which are:

1. support versus isolation;

2. adaptive versus mal-adaptive behaviour in transitioning;

3. adaptive versus mal-adaptive thinking and reasoning in transitioning;

4. competence and capability versus anxiety.

It was debated whether the 2^{nd} and 3^{rd} super-ordinate themes should be considered as one but as the aim of the study was to examine thinking and reasoning it was decided to allow this super-ordinate theme to stand alone. Also there were multiple abstracted themes contributing to this super-ordinate theme

Table 11: Demographics and characteristics of the participants in phase 1 of the study.

	51 Ruth	52 Faye	54 Jane	55 Helen	56 Mary	57 Lyn
Age	20-24	20-24	20-24	30-34	25-29	20-24
Gender	female	female	female	female	female	female
Time elapsed since graduation	9 months	9 months	10 months	2 years	7 months	2 years
Time with current employer	5 months	8 months	7 months	1 year (2 posts)	6 weeks	3 months
Preceptee	Yes	Yes	Yes	Yes	Yes	No
No of previous posts	0	0	0	3	0	3
On rotation	Yes	Yes	No	No	Yes	Yes
Current post	Medical	Trauma - orthopaedics	Paediatrics	Psychiatry	Medical	Triage medical
Past posts/rotations	Stroke	Day – hospital Care of the elderly	None	Medical Social work Community hospital	None	Social work Community hospital Teaching hospital
MSc / BSc(Hons)	BSc(Hons)	BSc(Hons)	BSc(Hons)	MSc	MSc	BSc(Hons)
Known to researcher	Yes	Yes	Yes	No	No	Yes
Nature of past researcher / participant relationship	Lecturer/ student	Lecturer/ student	Lecturer/ student	none	none	Lecturer/ student

4.5.1: Support versus Isolation

Figure 6: Abstracted themes contributing to the super-ordinate theme; support versus isolation.
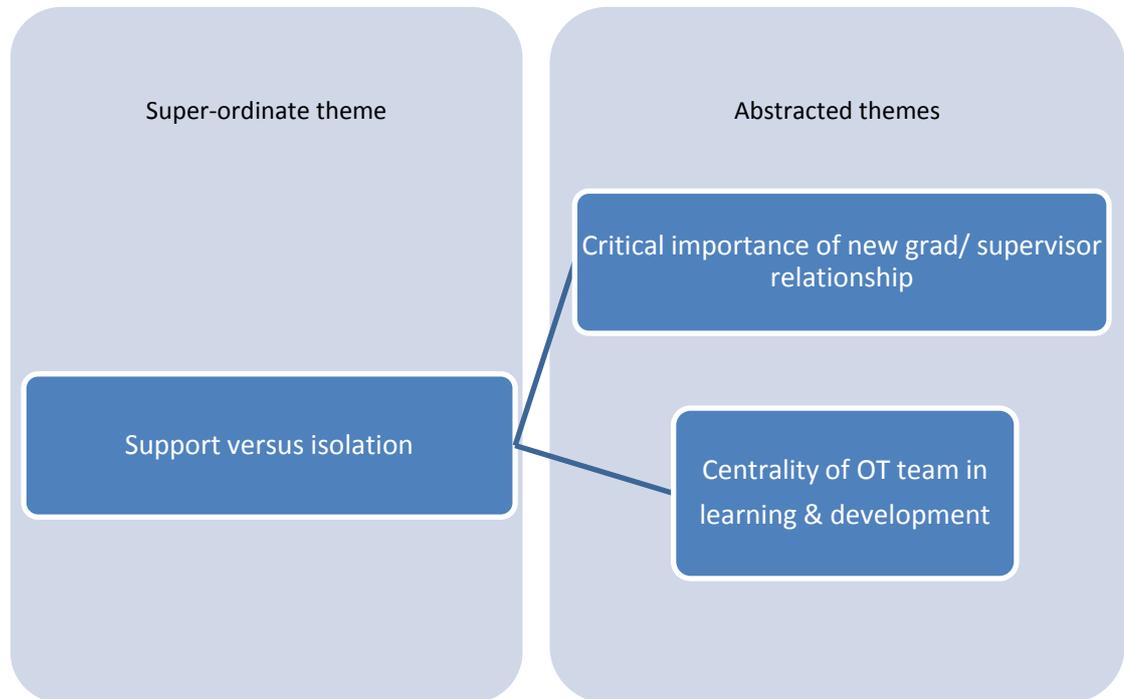
This super-ordinate theme was called support versus isolation. It was recognised during analysis that there was some polarization of abstracted themes. In this case the participants identified the volume, style and sources of support from their experiences. They discussed their perceptions of the support they were offered or accessed and reflected on successful and less successful supportive interactions and how this met or did not meet their expectations and needs. In opposition to these generally positive supportive experiences a number of the band 5 practitioners described and discussed or implicitly indicated experiences or feelings of isolation and the factors behind this. In the case of one therapist (55 Helen) this, combined perhaps with other factors discussed below, led to her resigning within the first year of practice from an NHS staff post and moving to a temporary post in another organisation.

With the exception of 55 Helen, who worked in a fairly unique setting with a senior occupational therapist who co-managed the unit, including other members of the MDT; the band 5 therapists

identified strongly with the occupational therapy staff group as their team and thereby their primary source of support. This did not necessarily need to be the case and appeared to be mainly at the expense of MDT working. It could be questioned whether improved induction and integration into MDT teams at an early stage would improve outcomes for patients. Certainly research that has examined outcomes for people with stroke (Scottish Intercollegiate Guidelines Network 2010), people who have hip fractures (Scottish Intercollegiate Guidelines Network 2009) and for people who have experienced a range of other pathological processes frequently treated by occupational therapists (Scottish Intercollegiate Guidelines Network 1998, 2007) has provided good quality evidence that effective, integrated MDT working improves outcomes for patients.

The reasons why the therapists identified so closely with the occupational therapy staff team appeared to be multifaceted, some were straightforward and operational, some were about accessing support, knowledge, feedback and clinical reasoning, others were more complex and related perhaps to professional identity, establishing oneself in a role, self-confidence, self-image and self-esteem. At an operational level induction and orientation were undertaken by the occupational therapy staff team, usually the supervisor or another band 5, some of whom might already be familiar to the band 5 therapist from practice education or meetings. Induction and orientation appeared to be primarily to the routines and practices of the occupational therapy department with limited corresponding induction into the MDT. It is undoubtedly more difficult to facilitate induction into the MDT, for example at a practical level with changing shift patterns, but from research there would potentially appear to be benefits in terms of improving patient outcomes, and from this study reducing isolation and conflict as discussed below.

In this excerpt 52 Faye discusses her first four weeks in a day hospital after which she rotated into another unit for 6 months:

Researcher:

In the day hospital initially, you were saying you had weekly supervision, I mean were you always working alongside your supervisor or...

52 Faye:

(Em) for the first weeks, yes, and then I was kinda, not, I think my supervisor was on annual leave for a week so that gave me the opportunity to kinda have a caseload (em) but still there was another OT there of the same band as me so I was able to work alongside her and not be totally be on my own.

Researcher:

Aye okay, that's good and how about the care of the elderly unit?

52 Faye:

(Em) I was given my caseload on the first day (em) and although my supervisor was there, she has another ward to cover herself (em) so I was kinda just left to it, yeah...

Researcher:

So did you have responsibility for one ward or one particular unit or...?

52 Faye:

I had responsibility for two wards, (em) <Name> (pause) (em) which were just acute care of the elderly

The experience described by 52 Faye in this extract was far from atypical; each of the band 5 therapists identified the key relationship during transition as being that with their supervisor. In the absence of the supervisor the band 5s looked to a peer occupational therapist for support. In the absence of a supervisor or peer, for example in the second unit in 52 Faye's account, there appeared to be little acknowledgement by the band 5 therapists that they were part of a multidisciplinary team who they could look to for support. 51 Ruth explained her experience thus:

Researcher:

As you've been transitioning to become a competent therapist? What's been the main support for you?

51 Ruth:

Em, well I think obviously you are allocated a specific supervisor in the different posts so I had <NAME BAND 7 ROTATION 1> in my stroke post and then (em) I have <NAME BAND 7 ROTATION 2> here. So they're, the, you know, sorta the direct people you can go to but obviously because you are in an office setting most of the time you have got, you know, anybody really to ask for

advice, which I've been doing in both settings and then (em) if you are needing any assistance up on the ward, you know, to move patients or whatever, you've got somebody there to ask as well, but as, I haven't really had that option yet at the moment so.....

In this account 51 Ruth identifies her supervisor as her main source of support, goes on to identify the other occupational therapy staff (the office setting) as being available for advice and looks to members of the MDT team for practical assistance only, although five weeks into the rotation she had yet to make use of even that assistance, let alone to support her thinking and reasoning. Universally, the band 5 therapists looked to their supervisors as a source of support for their thinking and reasoning. The type of reasoning that they were accessing was analogous to Barnett's (1997) critical reason or Kolodner's (1993) expert based reasoning whereby learners access the thinking and reasoning of others. Others in this instance can be, for example, in the form of guidelines, published research or some other form of guidance. In the case of the band 5 therapists, particularly in early transition it was the supervisor who provided this type of support, not the internet, not journals and not other professionals. There were few, if any, conflicts highlighted with first supervisors who were variously characterised as *"really lovely"* (**52 Faye**) and *"fantastic"* (**56 Mary** and **55 Helen**). The characteristics of a good supervisor were seen as being knowledgeable, open to questioning and readily available. There might be a question about whether in primarily using one source to support thinking and reasoning, a certain passivity might be engendered in the band 5s decision making and problem solving. This question is explored further in section 4.5.3 below.

Band 5 therapists who had been qualified for some time were conscious of the way in which their practices, thinking and reasoning were modelled on their supervisors.

57 Lyn

When you start off, you are shadowing your supervisor and you're looking to them, looking at how they clinically reason, looking at how they assess and treat people, so that you can then think about doing that in your practice

The nature and frequency of the support provided to the band 5 therapists was initially fairly intensive. Generally, in the first few weeks of starting work as a new graduate, daily informal support and weekly formal supervision was on offer from supervisors supplemented by informal support from other members of the occupational therapy staff team. As discussed in the sections dealing with phases 2 and 3 of the study it was generally recognised by the supervisors and managers interviewed for the study that the early transition weeks are a time where high levels of support are required. In some instances the level of support was negotiated between supervisor and band 5, in others it was dictated by the supervisors. Frequency of supervision was tailed off over the first few months the band 5 was in post. As can be seen from 52 Faye's account of rotating, (p.102), or 55 Helen's transition between being a student and a practitioner, below, potentially incorrect assumptions were made about the amount of support required by band 5s changing roles or locations.

55 Helen

NHS <Name>, was two years ago now, so if you bear with me, sorry, my memory is not great. I started on the general medical wards. I had actually done a placement there, so, you know, it wasn't anything new and my supervisor then became my senior OT, so I didn't get too much of an induction because I'd kind of done the job before, em, I got to see the basic paperwork and I did the basic fire, safety and that kind of thing, I got the corporate induction to NHS <Name>, em, I can't remember there ever being a specific period of visits or anything like that, that was really something that I had to work out myself, which I found really difficult because it was such a busy post and to be honest I never really got around to doing visits and that kind of thing.

The band 5s on their initial rotations, moving jobs or changing roles perhaps found these changes particularly stress inducing, apparently much more so than the band 6s on rotation or band 5s with two years experience. They tended not to be offered the high levels of additional support in these situations as the assumption was that as they had done the job elsewhere, this was not

required. It is known that changing work patterns, moving to a different line of work and changing work responsibilities are all stressful life events (Holmes and Rahe 1967). Also potentially adding to the participants' anxiety when rotating is a professional folk wisdom or meme repeated by a number of participants in all phases of the study that "every job is different". Memes are discussed further in section 2.3 and 4.8.4.

The nature of the support provided by the supervisor and occupational therapy team varied little, again with the exception of 55 Helen. Initially the new graduate therapists would be seen for formal supervision as frequently as weekly but this would tail off to monthly within the first six month rotation.

56 Mary

It is – it's formal supervision. We have a structured supervision session each time, and my supervisor's been fantastic, and my first supervision at the end of my first week she asked me what I thought I wanted, and because I felt like I was a new graduate, and because my course – I think it hasn't been quite as practical as a lot of other courses, I felt like I would benefit from quite regular supervision essentially – just with the first three months really. So I've currently asked for fortnightly supervision, and I've received that three times I think so far, but I think we're probably going to go on to monthly soon.

The nature of these structured supervision sessions appeared to have five components although the balance of these varied according to need. Three of these components could perhaps be related to Barnett's (1997) dimensions of critical thinking. In summary, the supervisors provided support within these sessions for the band 5s to engage in critical self reflection; the supervisors allowed the band 5s access to their clinical reasoning (critical reason) and reviewed the band 5's caseload (a combination of critical action, self-reflection and reason), facilitating planning, time management and goal setting. The other two components appeared to be integration into routines and socialisation

55 Helen's experience, like the unit she worked in, was unique in that, in addition to her clinical supervision, the MDT that she worked in had weekly supervision sessions which were facilitated

by a psychotherapist as well as weekly MDT training sessions. Five of the six band 5 therapists

had participated in Preceptorship. There was some variation in engagement, mainly it seemed

due to logistics but those who had had the opportunity to engage with Preceptorship appeared

to value it. Preceptorship was seen as an opportunity to obtain feedback on performance from

someone external to their context of practice and the Preceptorship appointments were in some

cases what prompted them to record their reflections formally in a structured manner.

52 Faye

Well the reflection one, (em) because I'm part of the Preceptorship, that's something that you have to do, (em), you have to reflect on your practice (em) you have to complete four tasks that are assessed by your sup..., by your preceptor and (em), then you have to reflect on those tasks, so that's, that's some of the things that, you know, that's an example of that,

54 Jane

I think probably within the Preceptorship it's quite well structured in the first six months so you could take each of the clouds and fit it in there. The self reflection I suppose you do subconsciously every time you come out of a session or even within the session, I have, you know, been doing that on a more structured basis on the computer for different things and then a few of those have gone into my Preceptorship, if they've been observed or things have been looked over.

Researcher

So is that some kind of reflective log that you've been keeping or is it for eKSF and Preceptorship specifically or is it for your own...?

54 Jane

Within the Preceptorship you have a number of different tasks and after each of those tasks and after you've got your feedback from your preceptor you're supposed to reflect on that process so that's more of a structured one.

In summary, there were almost universal accounts of supportive supervision with some

commonality in the way this was structured and conducted. The main source of support for band

5s was their clinical supervisor supplemented by other occupational therapy staff members as

needed and Preceptorship. Band 5 therapists consciously modelled their practice, thinking and

reasoning on their clinical supervisor. Where the band 5s expressed feelings or experiences of

isolation was within the context of the MDT and where assumptions were made about past experience.

4.5.2: Adaptive versus mal-adaptive behaviour in transitioning

Figure 7: Abstracted themes contributing to the super-ordinate theme; adaptive versus mal-adaptive behaviour in transitioning.
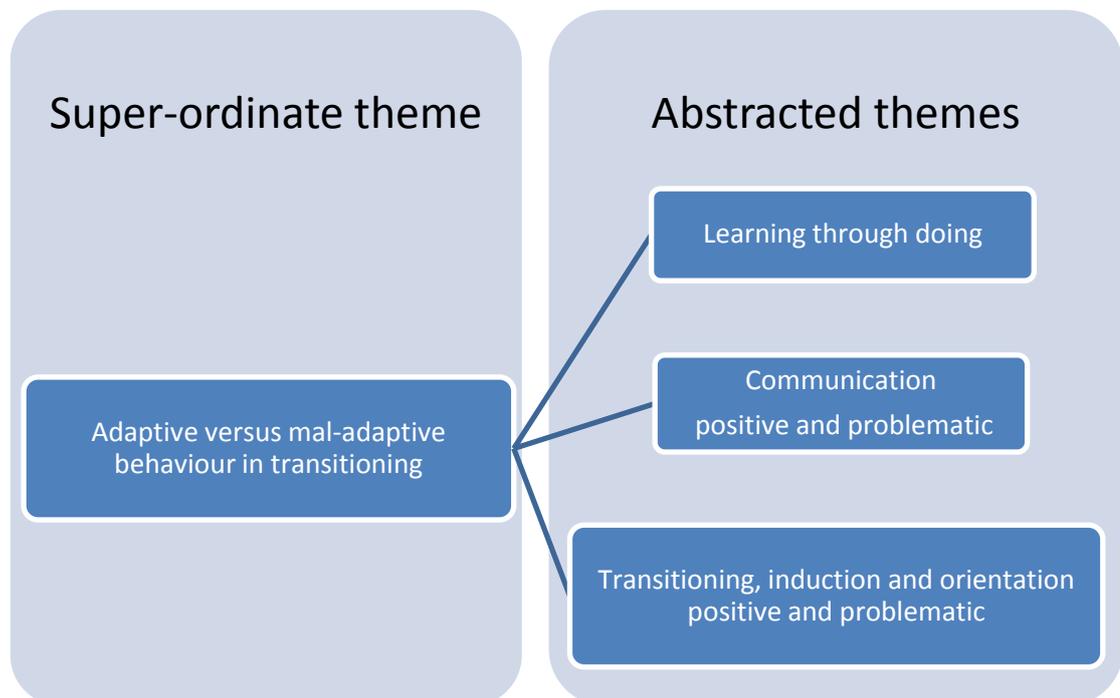
This super-ordinate theme was called adaptive versus mal-adaptive behaviour in transitioning. There were obvious overlaps with section 4.5.1 above and consideration was given to whether section 4.5.3 below should be subsumed into this theme. Participants identified a range of behaviours that impacted on the transitioning process. Some of these behaviours were adaptive, some did not aid adaptation. Adaptation can be conceptualised and defined in a number of ways, for example, the evolutionary Darwinian view is that adaptation is one of the fundamental characteristics of living organisms, in this case the characteristics of an organism's anatomy, physiology and behaviour that evolve to enable the organism to cope with the challenges of its

environment (Saladin 2001). The term has also been conceptualised by psychologists such as Piaget to encompass processes whereby thinking results from encountering novel situations and stimuli in the environment and adaptation involves the adjustment of thinking to the demands of the environment. As Evans (2010) pointed out, adaptation to the modern world of information technology, machinery and architecture is not a Darwinian process but behavioural, cognitive, social and linguistic, based on the development of the reflective human mind. The band 5 therapists expressed self-expectations and identified external demands on their adaptive capacity.

One theme that permeated all phases of the study and was repeated by all participants was the value of learning through doing. This was expressed by participants at the outset of their professional careers such as 56 Mary right up to therapists with approaching 40 years of experience such as 71 Emily.

56 Mary

something that I'm building on as I go – as I find out, you know, as I'm getting more confident about analysing how people are functioning and what their skills and their abilities can be, and being able to adapt to the kind of pathway to each different patient as I see fit

52 Faye

I feel that I, my thinking skills, my confidence, everything has really grown from starting work and that's really when I've started learning cause although you've got all the theory and you've done placements and things when you are a student, it's really when you start to practice it for yourself that you learn what's good and what's bad and what you should be doing and what you shouldn't be doing and (em), what works and what doesn't work (.) cause, and I think, well maybe actually it depends what type of learner you are as well, (em) definitely for me that's what I would say, that everything has developed since I started learning, since I started working.

This persistent theme may be related to a core value of occupational therapists which espouses a belief in maintenance or improvement in health and quality of life through engagement in occupations. However it may also have its root in case based learning which some participants

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characterised as experience or exposure to practice. In fact the band 5s, particularly during early transition, perceived themselves developing as therapists, i.e. adapting their thinking, communication and behaviour to the practice environment, through exposure to cases. One could question whether this type of learning might not present problems, firstly for the patient, where one could question whether they are receiving the optimal treatment from a therapist who is learning through doing and secondly for the transitioning band 5 therapist who has to develop the confidence and judgement to *do* or *not to do* as well as deal with the anxiety and fear of *doing* the wrong thing or *not doing* the right thing. Learning through doing, which was a transitioning strategy supported by participants in all phases of the study, was therefore heavily reliant on effective supervision, good relationships with supervisors and space for reflection. Where problems with this developmental adaptation existed it tended to be where space and time for reflection was restricted or where there was ineffectual supervision. Three of the band 5 therapists identified that in their first rotation or post, where they were very closely supervised; their learning was compromised through limitations imposed by their supervisors on their autonomous practice i.e. independently working with patients/cases. It was thought that there may have been a trade off occurring here between risk to the patient or therapist and facilitating autonomous practice. This finding is explored further in the analysis of phase two of the study as it was a theme strongly identified by supervisors.

Effective communication was viewed as being vital in facilitating transitioning. It was the one thing that both the first two participants asked to be added to the *critical thinking skills* word cloud and 52 Faye asked for poor communication to be added to *the barriers to critical thinking* word cloud. Subsequently *communication* and *poor communication* were frequently the skill and barrier selected by participants when selecting the most important critical thinking skills or most significant barriers to critical thinking in themselves and in people around them. However, when this was analysed, the band 5s were often talking about confidence in communication rather than verbal or written communication per se. The challenge was in having confidence in, for

example, their role, their knowledge or their patient evaluation and then having the confidence

in their communication skills to convey these to the MDT primarily, but also, in a more supportive

environment, their supervisor.

52 Faye

My confidence has definitely developed, (em), I was a timid wee thing I think when I first started,(laughs), not very wee, (em) (.) but now I'm much more confident to go and speak to, particularly medical staff (em) and put my point across and get their point as well, and see things from both sides, or try to see things from both sides, I'm not saying I'm perfect (em) that's definitely developed since I started working.

Problematic communication that was identified was either extrinsic, generally poor

communication within the MDT leading to confusion over discharge planning or intrinsic due to

the band 5 therapist's lack of confidence in articulating their role, treatment plan, evaluation,

thinking or reasoning. It could be suggested that in some of the instances the therapist's lack of

confidence in integrating into the MDT and communicating with its members could lead to

confusion over discharge planning and, where processes were impeding communication, lack of

confidence would preclude new graduate band 5 therapists from instigating change.

A number of successful strategies were identified with regard to improving communication.

Mainly these were strategies that boosted confidence in communication. Positive feedback from

members of the MDT or supervisor was valued. 56 Mary within the first few weeks of practice

had established a working relationship and good communication with the physiotherapist on her

wards through acknowledging the physiotherapist's expertise, accessing her reasoning and

working jointly on cases.

56 Mary

I work quite closely with the physio. Generally speaking, we don't really do a lot of joint visits, but I mean for the kind of more complex cases, I have – I think it's mostly because I am quite new, I've asked the physio if I can just sit in on her sessions for people who I just – I don't feel very confident about how to mobilise and whether or not they're safe. So, and that's been really, really useful

for me. But I do work quite closely with the physio in terms of, like you know, we do communicate a lot about what we feel a person's functional ability might be

55 Helen's specialist unit had numerous strategies in place to enhance MDT communication and thereby enhance patient care. 52 Faye on a third rotation had the confidence to initiate change on the unit to improve MDT communication which had been problematic.

52 Faye

When I was at <NAME Hospital> you were meant to get a handover on the ward every morning (em) so that you knew what was going on with the patients and who the new patients were, and this wasn't happening, just because of the short of staff and busy ward and things so (em) I spoke to the physio that was on the ward at the time, what we did was we went and spoke to the ward manager, about our problems cause understandably we can't do our job properly if we don't know the patients, (em) and she spoke to her nursing staff and it was arranged that we would get our handover every day at a specific time (em) that suited everybody. It might not, I mean it might not be the ideal time if they are busy but (em) it did, it did kind of work.

In summary, communication was a viewed as a key critical thinking skill. Effective communication corresponded strongly with confidence levels. Positive feedback from other staff or through self-perceived successful therapeutic interactions with patients built confidence and thereby improved communication in a positive cycle. Actively seeking out opportunities to build relationships and actively addressing problematic communication were effective strategies in developing confidence in communication.

When analysing the processes of transitioning, including the participants' induction and orientation experiences it was evident that some dispositions, characteristics and behaviours aided adaptation while others impeded or delayed adaptation. Two of the band 5s, 54 Jane and 55 Helen, stated that their transitions were aided by past life experience although it was unclear in 55 Helen's case how this impacted on her immediate post-graduate experience and she actually highlighted life experience more in being able to successfully move through four different posts adapting to four different teams within her first two years of practice.

54 Jane

I think I felt reasonably prepared. I think that I've had other life experiences that have prepared me for this role. Like I worked for a children's charity providing respite for children with autism and then I've done my travelling and things

55 Helen

Em, yeah..., yeah I've started a lot of different jobs before as well like I've done like a lot of part time things and stuff and I think that that makes it easier, just the practicalities of meeting new people etc., etc

Allied to life experience was past student practice education placement experience. In general past experience in a particular clinical specialty was seen as desirable when transitioning into that speciality and where there was no relevant practice education experience this was identified as contributing to self-perceived impaired competence. The exception was where assumptions were drawn by supervisors based on band 5s past practice education experience as discussed in section 4.5.1 above.

51 Ruth

(Em) Well, I think because I'd been on a placement in stroke before, so in a way I sort of knew roughly what I was expecting from there

Where there had been a delay in commencing employment after graduation this impacted on the band 5s self-perceived confidence levels and all three band 5s who had had a delay in commencing work expressed concerns about having forgotten skills and clinical knowledge. This self-perceived erosion of skills and knowledge was and is of concern given the ongoing shortage of posts for band 5 therapists and resultant delays in new graduates finding posts. The major impact seemed to be on self-confidence which, as mentioned above, can adversely affect the adaptation of the new band 5s to practice. This feature was evident even in participants who only had to wait a few months before finding work.

51 Ruth

(em) I think because I hadn't worked immediately after graduating I was scared that I'd forgotten everything and I wasn't going to know what to do at all, so I think it would have been probably better if I'd managed to get a job not long after graduating rather than not working for 3 months

52 Faye

Well no, not, not at all, (em) the day, the night before I started my job I didn't sleep one bit, (em), (pause) but I felt, I mean (pause) when you are not working I didn't feel prepared at all, I thought oh I can't do this

The lack of availability of posts for new graduates impacted on the choices that participants had available to them when it came to their planned career. The two participants who were MSc students, (55 Helen and 56 Mary), and who presumably had the greatest levels of student debt, had a strong interest in psychiatry but had for economic reasons taken first posts in acute medicine. For 55 Helen in particular this impacted on her transition.

55 Helen

My kind of experience at <NAME HOSPITAL> was quite (laughs) strange really, I was always wanting to work in mental health so kind of doing physical rotations and placements was really difficult for me, just really, felt really unnatural ... and I really didn't like working in a general medical ward, (emphasised) so it was a really difficult transition actually.

56 Mary

For me, because of the nature of this rotation, not prepared at all, and I mean, there's a few reasons for that, and the main one is that – is that I really focused on mental health, and all my background and my work experience is in mental health, and I've never actually worked with physical health before. As a student, I did placements that weren't very related to this job.

Another feature of these two participants was their stated lack of confidence in the accelerated mode post-graduate courses that they completed when compared with their peers. From discussions with supervisors and managers in the later phases of the study it became apparent that this self-perception was not entirely accurate in that they were not unusual in their transitioning experiences and in fact their additional maturity and life skills were appreciated.

However this self-perceived lack of skills and knowledge did appear to impact on their confidence. It may have been that they were experiencing very similar challenges in transitioning to other band 5s but attributing these to their, as they saw it; non-traditional, training.

55 Helen

... and maybe it's different because of the way that I was taught occupational therapy and it wasn't kind of lecture style, maybe that it is at <NAME UNIVERSITY>, I don't know, it was a bit different and it was shorter as well so maybe I didn't come out with all the skills that maybe an <NAME UNIVERSITY> student has come out with, so that's possibly where my kind of downfall was.

The final adaptive behaviour that appeared to predict successful transitioning was active engagement with the opportunities provided during induction. Where participants identified that their anxiety levels were high, that they were finding time management challenging or their confidence was low, their accounts of engagement with induction activities, Preceptorship, supervision etc. tended to be woolly and unfocussed. Conversely where the participants reported feelings of achievement, effectiveness and building confidence, competence and capability there was evidence of clarity and understanding of their induction, early engagement with Preceptorship and a positive and structured approach to supervision. Obviously there were "chicken and egg" elements to this in that, for example, if time was pressured, preparation for supervision may not be prioritised, supervision might be less effective than otherwise, there may be impeded exchange of clinical reasoning with the supervisor, patient management and therefore time management was less effective than it otherwise might be, and so on.

Therefore, in summary, certain characteristics behaviours and dispositions impacted on the participants' adaptations in transitioning. Life skills, including practice education and university experiences could affect the self-image and self-confidence of the band 5 therapists. Some behaviours were associated with effective adaptation and the absence of these behaviours with lowered self-confidence and expressions of anxiety in this group of participants.

4.5.3: Adaptive versus mal-adaptive thinking and reasoning in transitioning

Figure 8: Abstracted themes contributing to the super-ordinate theme; adaptive versus mal-adaptive thinking and reasoning in transitioning.
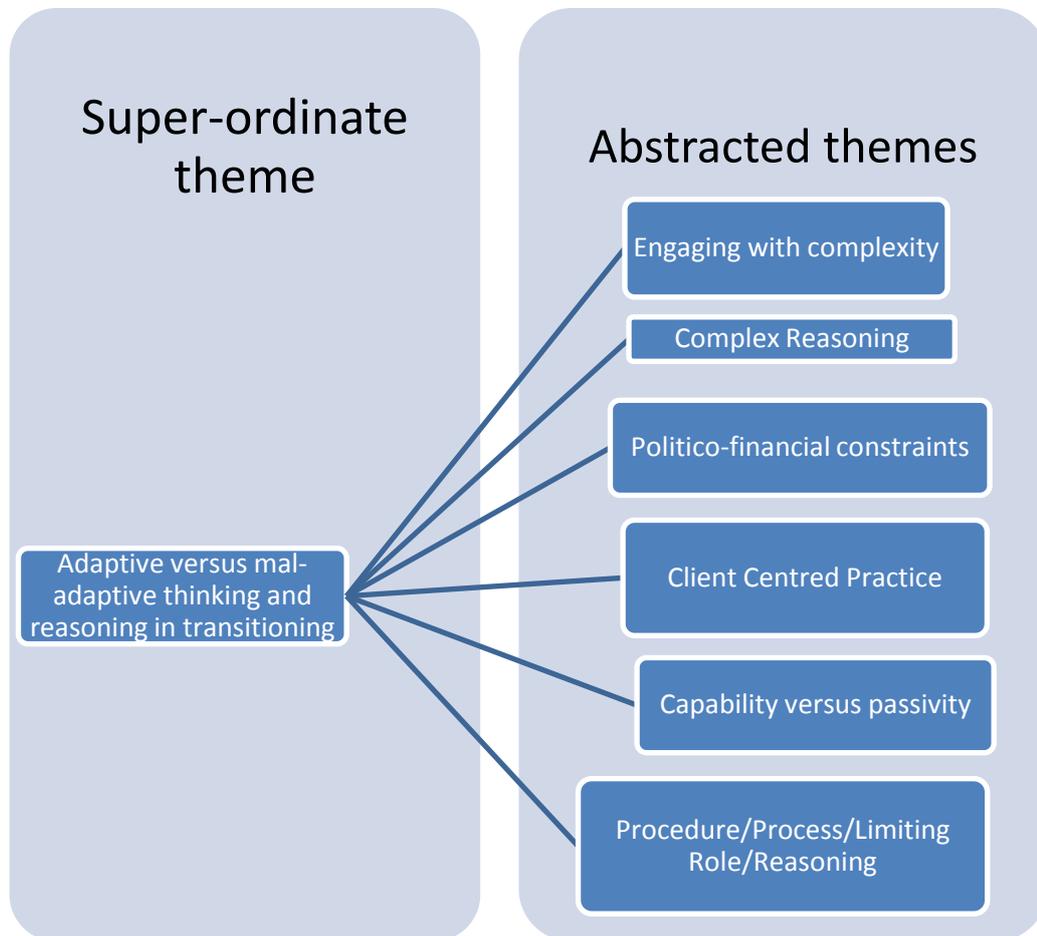
This super-ordinate theme was called adaptive versus mal-adaptive thinking and reasoning in transitioning. In order to address the aims of the study, a significant portion of each semi-structured interview was dedicated to thinking and reasoning, resulting in a considerable volume of data and subsequently a significant number of abstracted themes.

It quickly became evident that the band 5 therapists were engaging with complexity. This was evidenced by them illustrating their accounts or making reference to cases which ranged from complex assessments of children to working with people with life threatening psychiatric disorders to discharge planning with elderly people who had multiple health and social care

problems. All of the band 5 therapists interviewed were readily able to identify patients with complex needs in their caseloads. It was a self-expectation and, as became evident later in the study, an expectation of supervisors and managers that the band 5 therapists would have patients with complex needs in their caseload. In addition the band 5s were working in contexts of complexity. Four of the six identified that they had worked in newly created posts (57 Lyn, 55 Helen, 54 Jane) or in posts that had been significantly redesigned (52 Faye, 57 Lyn). They were working in schools, day units, the community and outpatients as well as with hospital inpatients. In these situations they were expected to, or to assist in, establishing the occupational therapy role, the band 5 role within that and act as an advocate for their profession. This at the same time as building their skills, knowledge, capability and confidence; to learn routines practices and procedures, learn to delegate to assistants etc. It became clear from the earliest interviews that the band 5s were functioning and were expected quite quickly to function at levels above Dreyfus and Dreyfus (1986) novice or even advanced beginner level identified in the widely cited Dreyfus Model of Skills Acquisition. It could be suggested that some of the anxieties expressed by band 5 therapists may have been attributable to a conflict between expectations and self-perceived competence and capability.   These expectations were both self-expectations and the expectations of others. This finding is discussed further in section 4.5.4 below

In her second band 5 post, four months after qualifying 57 Lyn obtained a part time post in a community hospital which was returning to the NHS and with a service undergoing redesign, after a short experiment with privatisation. She managed to increase her hours to full time in the absence of a Community Rehabilitation senior occupational therapist.

57 Lyn

Yeah.   There sort of, there wasn't – there were a lot of hip replacements… elective hip replacements and knee replacements, and the service had just changed from private to NHS. So it was just being… I was just helping re-set it up again, so it was quite slow the surgeries. You didn't have a lot of patients. But then obviously, the rehab in people's houses, that was full on. But again, it was a different pace of working and you got more of a chance to develop your clinical reasoning skills, think about different conditions and the effects on their functioning. Whereas,

working in the acute, you kind of – it's more like you just need to know it all and just go with it, sort of thing. It's on a different experience from starting acute.

55 Helen evidenced some of the complexity in her work with people with longstanding psychiatric problems through describing some of her casework in the community which involved transitioning people from hospital to home.

55 Helen

I suppose here, going out with really complex patients, maybe going out into their homes when, you know they haven't let other people in for pretty much their whole life, something that's really difficult for them, and I suppose you have to pull on all your resources that you've learned about people and how they relate when they are that unwell, you know, em to be able to do that piece of work with them

In engaging with complexity and describing their interactions with patients, the band 5 therapists evidenced multiple instances of advanced clinical reasoning and critical thinking. This finding conflicts with some established theories of the development of clinical reasoning in practitioners, which suggests that novice therapists predominantly employ procedural reasoning in their practice (Dreyfus and Dreyfus 1986, Mattingly and Fleming 1994). It appeared that the band 5s who had graduated most recently were attempting to use procedural reasoning as a way of coping with the challenges of transitioning but that this search for a recipe or formula that could be applied to all patients to "get you through" was ultimately an unsuccessful strategy. 56 Mary discussed her own "pathways", checklists which she was trying to use with her patients during the first few weeks of her practice and went on to explain the benefits to her of having a stepwise process and how she was transitioning from that approach to interactive reasoning as her confidence built.

56 Mary

I think that the procedural reasoning is certainly something that I've… It's made my job a lot easier because it's much easier to get to grips with the kind of standardised way of doing things, you know when you're kind of staring from the bottom, and it's like a checklist and you can make sure you're doing everything, which as for me, like, my main concern at the moment is risk. It's making – just for me – it's good to know that I've been through all these steps and I'm doing my job properly. Interactive I suppose is something that I'm building on as I go – as I find out, you know, as I'm getting more confident about analysing how people are functioning and what their skills and their abilities can be, and being able to adapt to the kind of pathway to each different patient as I see fit.

It could be questioned whether 56 Mary's pathway was for her benefit or her patients. However,

with a few months of practice under her belt 52 Faye was using interactive reasoning confidently.

52 Faye

(Em), I use that quite a lot actually (em) because I think it's important to get a picture of where a patient's come from, maybe not their entire life story but where they are at that moment and what they, what they do, to be able to, for me to think about, right well, if that's where they've come from and if that's what they want to get back to (.) what do I need to do (em) to help him get back to that (em) so it's quite, especially when I first meet a patient it's quite good to have (.) I wouldn't say a lengthy conversation about it or anything like that but, (em) definitely get a picture of where they've come from. I usually follow the, follow the initial interview but a lot of patients will, you know, speak beyond that and (em) I'll ask questions that aren't written down and things like that to get a better idea of things.

57 Lyn with 2 years of experience reflected back on her early career as a time when she built up a

store of "cases" and valued case based reasoning in her current practice

57 Lyn

When you start off, I mean, that's what it's all about isn't it? It's when you're with a patient, and what's gone wrong and what's gone right, and what can you do for next time, and from gaining experience, and building your experience or assessing and treating patients, you are sort of developing your clinical reasoning.

55 Helen, in what was probably initially a slightly flippant remark, evidenced that two years into

her career she was comfortably leaving procedural thinking behind and had the flexibility of

being able to modify her thinking and reasoning dependent on the context and her current and

past interactions with the patient. At times this appeared to be intuitive and/or subconscious. In

the instance below, cues feeding into clinical reasoning were picked up in informal and formal

settings from patient narratives, verbal and non-verbal interactions

55 Helen

I don't think they actually sat down and said, "well you know, you have done your initial assessment, what's next, you know, what would you do for this person". So, now I'm just making it up as I go along.. (laughs)

55 Helen

You are kind of; you are knowing what you are going to do next really. A lot of it is repetitive as well, I think that's a really good opportunity to kind of sit and listen but be elsewhere, I don't mean that in a bad way, just like, it's already been discussed so you can kinda be processing a bit more, what's the next stage, em, and just speaking to people, I think and picking up bits from what people say. Again, I'm kind of fortunate that I spend the day with the patients here so kind of get their stories all the time em, so yeah ...Interactive reasoning, to me is about making clinical judgements at the time, really, it's about working with someone, maybe out in the community that's a difficult patient and its being constantly mindful about how that person is coping with that situation and if it has to be graded at the time or changed or if the person has to taken out of that situation altogether em, so that's something that you don't necessarily know, for example .....

The band 5 participants in this study were relatively quickly, post-employment, engaging in

modes of thinking and clinical reasoning associated in the occupational therapy literature with

therapists who have moved well beyond what has been termed novice level.

There was one area of thinking and reasoning where the participants consistently stated that

they felt underprepared by their university courses and practice education.   This was in

appreciating how significantly financial or political constraints could potentially impact on their

role, restricting treatment options and treatment planning.   In the occupational therapy

literature this might be encompassed in the style of reasoning called pragmatic reasoning

(Chapparo and Ranka 2008). In particular this related to discharge planning and this aspect is

dealt with separately in section 4.5.4 below, as discharge planning was the most significant

source of anxiety in the participants. However, a number of the participants were involved in situations where service redesign was impacting on roles, choices and practices.

52 Faye

I think (em) now that I'm in the service I can see a lot of things that are being influenced by the financial side of things (em) for example a lot of social workers have just been made redundant, now that's not NHS, that's <NAME> City Council but then I can see what effect that's going to make on the rest of the hospital and I can see that the OTs might be asked to do the social worker's jobs sometimes (em) so, but when I was a student, you are kinda shielded from all that kind of politics and things so although I didn't know, I knew everything wasn't happy and perfect, in that kind of sense but (em) I think it's, coming into the job I see that its different than what I thought it was

54 Jane

It is something within the Health Services that you always come into contact with, I don't think I realised to what extent you have to gear, like mould, your reasoning into what is available. Em I think also because my elective placement was a private charity when I came here I was kind of like "oh I'll get this one for this, get that", you know you can't do that here because of funding, em so I think that is touched on at university but maybe when you actually get into the role you kind of realise the different constraints that you have, know how you have to mould your service around that.

The lack of awareness of politico-financial constraints in the new graduate band 5 therapists was borne out in interviews with supervisors and managers and it was apparent from all accounts that students on placement and in university are exposed to this aspect of practice in a fairly limited way and therefore it is one aspect of practice that they do learn by doing.

An aspect of dealing with politico-financial constraints that the participants who had graduated most recently found particularly challenging was where these conflicted with client centred practice. There is a client centred frame of reference within occupational therapy that is heavily emphasised to undergraduates. Client centeredness is a thread that runs through both the Professional Standards for Occupational Therapy Practice (College of Occupational Therapists 2011) and the Occupational Therapy Code of Ethics and Professional Conduct (College of Occupational Therapists 2010a) and while both documents contain caveats about finite resources

and priorities limiting therapist's options, the ideal that is very much promoted to students is that occupational therapy interventions will be focussed on the needs, choices and aspirations (College of Occupational Therapists 2011) of service users. Some of the band 5s were clearly delivering services that catered to the needs, choices and aspirations of their patients or had been able to do that in some posts or rotations. However, for the recent graduates commencing employment on busy acute medical or care of the elderly units, with limited or no exposure to politico-financial constraints and poorly developed pragmatic reasoning skills, this dichotomy between their internalised, instinctive client-centeredness and the reality of fast-paced hospital environments where discharge planning was central to practice, appeared to be a considerable source of anxiety.

56 Mary

For example, we spoke about home visits before, well the main reason I don't do home visits isn't because you know, I can't, it's because in the time it would take me to do a home visit, I could probably see three or four patients in hospital, and that to me seems – it seems unfortunate really because I would – for me I would have a much better idea of that what I'm doing is the appropriate thing for the client.

55 Helen (reflecting on an earlier post)

So, you know, it's so stress-full, and I think about new grads going into that post and I just think there is no time for them to sit down and think what the plan is for this person as an individual because there are <u>huge</u> pressures from hospital management and GPs and, em, who are all at the meeting, to sit down and say "Yeah, they'll probably be discharged"

In section 4.5.3 above it was identified that successful adaptation was associated with particular behaviours. When discussing thinking and reasoning it became evident that in a similar way successful adaptation was associated with the development of certain attitudes, dispositions or behaviours. Therapists who were feeling overwhelmed or particularly stressed exhibited different dispositions or attitudes, in particular a certain passivity in the development of their thinking and a withdrawal into the use of procedures whereby they limited the scope of their

role. Unsurprisingly perhaps, therapists who exhibited adaptive behaviours, as in 4.5.3 above, were the therapists who adopted a critical thinking disposition and appeared to be able to move readily and flexibly between modes of clinical reasoning. It could potentially be argued that limiting the role and dealing with each patient by following a procedure would be a successful strategy in a situation of complexity but in fact this did not appear to be the case as those who adopted that strategy experienced conflicts with the MDT and it could be questioned whether their patient outcomes were optimal, based on their discussion of cases.

55 Helen (referring to an earlier post)

It was about just not feeling like I'd done anything, just ran about for the entire day and I just felt like I was fanning the flames really not, really achieving anything, it just wasn't my style of OT. The whole thing was just discharge planning, I just ... I didn't feel like I was achieving anything at all but at the same time I was absolutely knackered

Passivity might be illustrated by the account below where the therapist, several months into her post had yet to engage in any meaningful way with Preceptorship, perceived herself as not having developed her clinical reasoning due to lack of opportunity, was unclear on arrangements for CPD time, was not particularly motivated to improve her knowledge and unclear how to develop the skills required to acquire that knowledge. This was a relatively atypical response to a question about the development of clinical reasoning in practice; the participant was asked how she thought her reasoning had developed since qualification

A participant (deliberately anon)

Well, I don't think it's developed that much because I haven't really had much opportunity to do it (em) I'm trying to, to get into doing it (em) more but (em) obviously, once you are, once you are tired at the end of the day, you don't want to go home and really look at journal articles all the time, but I am trying to get better at it, (em) I think it just takes a bit of time once I get, you know, more into working full time and get used to it I think it'll improve, and we do have CPD time every month, I think it is, (em) that we have to use in the department to, sort of, get our knowledge up and (em) learn about evidence and things (em) I haven't, I haven't had it allocated to me yet but (em) when I get it I will use it for doing, you know, CPD and things like that

This same participant when asked about her favoured style of reasoning explained

Well, I think procedural and pragmatic are the ones I'm doing the most (em) out of all of them, probably (.) procedural more than pragmatic cause most of my patients are aiming for home rather than nursing home or care homes (em) so I would say, I'm probably doing that about fifty percent, I would say, (em) (.)

55 Helen, again talking about an earlier post, which she left fairly quickly, reflected

55 Helen

I think when you first start a job, you don't know what you don't know so it doesn't feel so scary, you are just kinda like a bit more confident maybe than you should be (laughs) cause if I think back to some people who I discharged, you know, you think, You weren't looking at the whole picture because you know, your reasoning's just not all there, it's very kind of limited at the time, I think, but, in retrospect, yeah it was terrifying but at the time, maybe not

Behaviours and attitudes that appeared to facilitate the development of thinking and reasoning were similar to 4.5.2 above but also included active and conscious formal reflection in action and on action, information and evidence gathering, openness and actively seeking the opinions of and feedback from others, engagement with the MDT, confidence in communication or a "facade" (57 Lyn) of confidence in communication. These band 5s were making the most of and actively engaging with supervision and were prepared to question supervisors and others appropriately. In this way they were building their case based reasoning and flexibly using or beginning to use other advanced styles of reasoning.

4.5.4: Competence and Capability versus Anxiety.

Figure 9: Abstracted themes contributing to the super-ordinate theme; competence and capability versus anxiety.
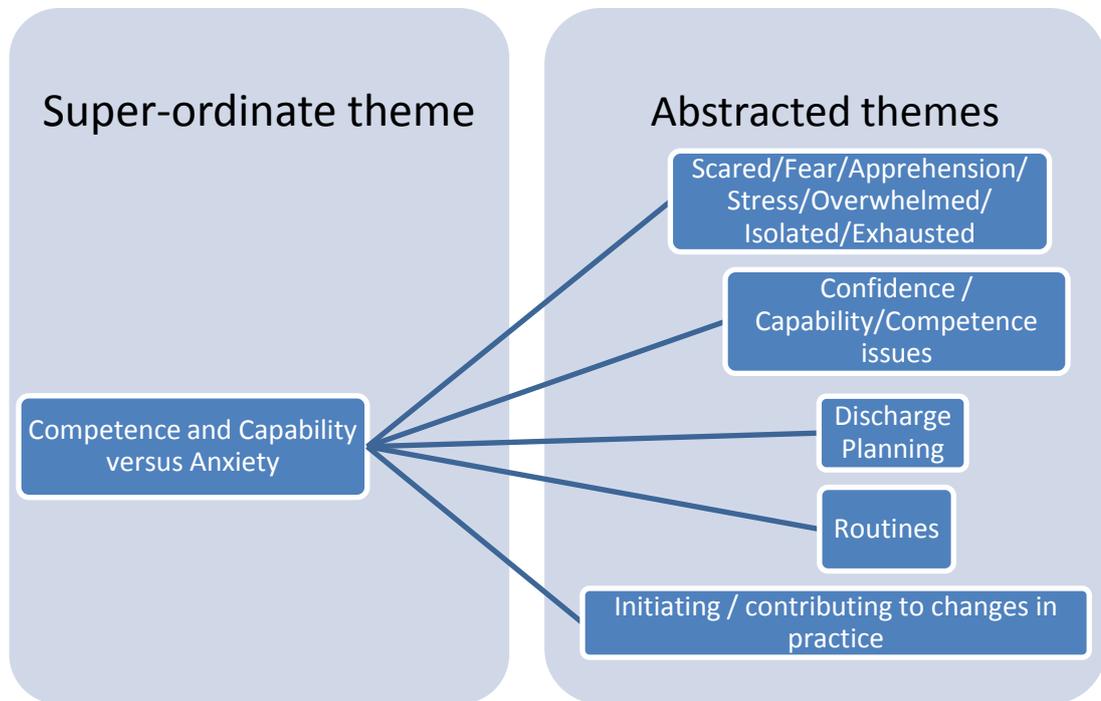
This super-ordinate theme was called competence and capability versus anxiety. It was recognised that in this instance there were polarized abstracted themes whereby the participants universally identified feelings of anxiety or fear during transition or when reflecting on their transition. The words used to express this anxiety or fear differed from, for example "scared", "apprehensive", "fear", "worrying", and "stressful" to straightforward "anxiety". There were few positive words used to describe their feelings towards transition. For example it might have been expected that they might feel excited to be commencing employment. In a number of instances where the participants identified feelings of apprehension and fear either anticipating their transition or anticipating a new rotation they were able to reflectively say that their fears were not borne out. Universally the participants described exhaustion or extreme tiredness or feeling overwhelmed during the initial transitioning period. In opposition to those feelings were accounts of building competence and capability, achievement and goal attainment. These

accounts varied from new graduates who were highlighting positive feedback in early supervision sessions to participants with a little more experience who were contributing to change and research within their departments to the two participants with two years of experience who were undertaking further training in clinical skills as well as planning to become practice educators themselves.

Commencing a new post for the first time is undoubtedly a stress provoking event (Holmes and Rahe 1967). Albrecht (2007) listed five basic fears: extinction, mutilation, loss of autonomy, separation and ego-death (humiliation). Of these five, the fears and anxieties expressed by the band 5s mainly fell within the final category although loss of autonomy, expressed in terms of feeling overwhelmed and acceding control to others (the MDT), and fear of separation, expressed in terms of not being respected or valued by the group (the MDT or peers) were also evident. The anticipation or fear of shame or humiliation was usually expressed alongside a self-perceived lack of competence and capability on commencing employment along with expressions of low self-confidence. This long extract from the interview conducted with 52 Faye is not atypical of the accounts of other participants.

Researcher

Right, okay, that's grand, how, how well did you feel prepared for practice

52 Faye

Not at all

Researcher

Not at all no ... (laughs)?

52 Faye

(laughs) Well no, not, not at all, (em) the day, the night before I started my job I didn't sleep one bit, (em), (pause) but I felt, I mean (pause) when you are not working I didn't feel prepared at all, I thought oh I can't do this but as soon as you get into it and you get to know, you know, a few weeks down the line , although I didn't know a lot, I felt like well actually this bit that I did at uni, I can apply here and this bit that I did at uni, you know, it all kinda made more sense and although, I think when you, when I was a student going on placement was when kinda it all came together, so going from being a student into work (em) again it just made it all really come together. And (em) I did feel terrified to start with

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Researcher

So what were, what were, you speak about feeling terrified, what were the terrifying things, what were the things that stopped you from sleeping the night before you started

52 Faye

(Em), In case I made a mistake, in case I did something wrong, (em) that hurt a patient or that was the wrong decision for patients, because I knew I was going to work with elderly people (em) who, many of them don't have the capacity to make their own decisions and I ended up fighting a lot of battles for them (em) and (.) I was terrified, I was terrified that I would just be the one responsible for putting this person in a nursing home when they didn't want to go in a nursing home, you know, things like that and, (em), big issues, which I, which I've not been left to deal with on my own, I've worked through with my supervisors and things.

The exhaustion that the participants experienced when transitioning into practice was common to all. It did not seem to be associated with increasing work hours as many of the participants had been in employment in care settings while waiting to commence employment. It did not come from workload as the therapists with two years experience were now carrying higher caseloads than they had as new graduates and the new graduates were relatively well supported. It could be suggested that the exhaustion that the new graduates experienced related to the type of thinking and reasoning that was required of them and one of the dispositions that they adopted. The problematic disposition related to ownership, either ownership of a caseload or a ward or a series of wards. The band 5s who had recently gained employment expressed repeatedly that they were responsible for their patients, the more experienced band 5s and therapists in later phases of the study identified with this feeling but had better developed pragmatic reasoning skills and appeared to be better able to share responsibility with the MDT. Exacerbating this problem was the limited development of case based reasoning and intuition. New graduate therapists relied to a large extent on system 2, effortful thinking (Kahneman 2011). They would state that they were constantly reflecting, during and after each treatment session. All this was occurring at the same time the new graduate therapists were learning routines, skills, practices and procedures. It is known that system 2 thinking is effortful and tiring leading to what Baumeister and Tierney (2011) call ego depletion. It may be that the exhaustion

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experienced by the new graduate therapists was a result of the thinking and reasoning required

of them in combination with the self expectation of ownership and the lack of more advanced

thinking skills i.e. intuition, case based reasoning and pragmatic reasoning that more mature

therapists are able to draw upon. 56 Mary discussed her exhaustion. One interesting feature of

this account is that interruptions "drive her crazy". This might support the idea that ego

depletion is in evidence here as erosion of self-control is one of the features of ego depletion

(Baumeister and Tierney 2011).

56 Mary

I have noticed however, that it does take me longer to do initial assessments, especially than it would for other people, I think probably because I am – I'm still starting to understand, I'm still working on understanding what the really kind of critical components with initial assessment is, and you know, if somebody has this diagnosis, I'm still having to go through every single question, because I don't know all the different diagnoses, and I'm not 100% sure of the functional repercussions of that might be. I have noticed as well that if I'm distracted for any reason – so if there's a lot of noise on the ward, or you know, if the doctors come in and interrupt my assessments, it drives me crazy, but you know, if I'm interrupted, I have noticed that it does probably take me a little bit too long to actually get back to what I was talking about. I feel like I'm really concentrating. It's getting easier. The first week, I was absolutely exhausted after every single patient contact because it's like all my attention is focused, and I'm unable to just kind of relax and take a stand back, and just take a breath, because the whole time I'm thinking it feels – it felt really, really intense, and it still feels fairly intense.

The single most stress provoking activity that the participants highlighted was discharge planning.

All of the therapists, bar 54 Jane who worked in outpatients, identified anxieties and fears about

discharge planning. Managing risk in discharge planning was the area where some of their fears

and anxieties were perhaps realised particularly in relation to MDT working. They evidenced

conflict and on a few occasions aggression within the MDTs. There were times when they felt

that their opinions were not valued or were ignored or where their role was being defined by the

MDT. Each of the therapists identified this aspect of transitioning but the therapists who were

further into practice appeared to have developed a certain amount of resilience (Bannigan 2009)

and either took a far more pragmatic approach to discharge planning or had moved posts.

57 Lyn

You know there's always limited time to see someone. It depends what ward you're on. Some of the wards do not have like a push for discharge like the geriatric ward that I work on does, but I think you can still do a full assessment and be pushed for time, and that's what we – it's a really good service that we provide upstairs, and that's certainly what we do, we do a full assessment and take all these kinds of reasoning into account, but you can see, like the consultants using pragmatic reasoning, that they're very concerned about beds, and if someone seems okay, and not really medical, then home. Especially if there is lot of social issues at home that we would be concerned about, consultants are not often – I keep saying consultants because we work with them very closely, but they're often maybe not concerned about that because it was happening at home, therefore, it's not our problem, so to speak, unless it impacts on patient's safety.

There were a number of abstracted themes that demonstrated features of transitioning that have not been discussed in the preceding sections but which appeared to mitigate against anxiety and fear. In addition to the dispositions and behaviours previously identified above integration into routines and contributing to developments or changes in practice appeared to permit the therapists to internalise or perform some activities automatically, in the case of routines or to see the bigger picture and to feel valued, in the case of developing or changing practice. Greenhalgh (2008) highlights that amongst other advantages of the initiation into and establishment of routines are reduced uncertainty and complexity of individual decision making and thereby reducing the demand on system 2 effortful thinking. Where the participants had the opportunity to be involved in practice development, active engagement and seeking out opportunities appeared to improve confidence, boost self esteem and permit feelings of achievement.

55 Helen

I feel in this post I can really access anything I want. There's a library, a resource centre up in adult mental health, em, and the lead OT for specialisms is always sending round em, information days and things like that, that we are welcome to go to, which is fabulous, I'm going down to London for a study day, yeah, next month and I'm doing my AMPS course in August as well, so there is loads of scope.

In summary, the participants expressed heightened levels of anxiety and exhaustion at the time of their initial transition into practice. This appeared to be associated with a disposition of complete ownership and responsibility for patients combined with limited pragmatic reasoning and reported low self-confidence in skills, knowledge and capability. Exhaustion might be associated with complete reliance on effortful system 2 thinking and ego depletion. Integration into routines and engagement with practice developments in addition to the support identified in previous sections appeared to mitigate these effects.

Section 4.6: Phase 2, The Occupational Therapy Supervisors

"We've always referrals pending so there is always a waiting list for people to get in. And we take from 18 to…whatever and everything in between. So it's a very mixed client group…pretty challenging…but great. Absolutely love it, love it!

67 Lara, a Band 7 occupational therapist, study participant and clinical supervisor.

4.6.1 Introduction

Upon preliminary analysis of the data from phase 1 of the study it became apparent that the key relationship in ensuring successful band 5 transition was the relationship between the band 5 occupational therapist and his or her supervisor. It became evident that it was this relationship rather than that with, for example, the multidisciplinary team or with peers that should be the focus of phase two of the study. This section therefore contains the findings from the analysis of data obtained from semi-structured interviews conducted with band 6 and 7 occupational therapists who had experience of supervising new graduate band 5 therapists. They would also be able to add to the author's understanding of the transitioning experience with the added perspective of experience and as individuals with responsibility for transitioning the next generation of therapists. Two of the supervisors in this phase of the study were responsible for providing supervision for band 5s included in the previous phase.

In this section the findings from the analysis of the interviews conducted with the participants included in phase 2 of the study are presented. The section is structured in a similar way to Section 4.5 above. Table 12 below summarises the characteristics of the seven participants in phase 2 of the study and the nature of any relationship with the researcher. All of the participants in this phase of the study were female and their ages ranged between 29 and 50

(median = 43). One participant was well known to the researcher, one was a former student, three were casually known to the researcher and two participants were previously unknown. A decision about including the participant well known to the researcher was made on discussion with the research supervisor when a written expression of interest was received. It was decided on balance to proceed with this interview due to the unique perspective that this participant was potentially able to offer. In the event this interview provided valuable data to the study which would otherwise have been unavailable. The participants in this phase of the study had extensive experience of occupational therapy in a wide variety of clinical and non-clinical specialties and geographical locations.

The section is constructed around three super-ordinate themes, which are:

1. autonomy versus risk;

2. support for competence: managing anxiety

3. support for capability (engaging with complexity) vs. shock of practice (withdrawal into procedure)

The third super-ordinate theme does appear to be somewhat unwieldy; however, it is grounded in the data. It was originally two super-ordinate themes but on analysis the third and fourth components were certainly synonymous and the first two contained very similar emergent themes that could potentially have been subsumed into either super-ordinate theme.

4.6.2: Characteristics of the Participants

Some of the findings generated from the interviews with these participants lay outside the strict focus of the study, which was on the thinking and reasoning of new graduates. However they do either add to understandings or provide a context for the accounts of the participants.

One feature of these seven accounts that emerged when undertaking the analysis of the interview transcripts was that each of the participants, either consciously or subconsciously, referred with variable frequency to the band 5 therapists as students or trainees. This perspective contrasts with the Agenda for Change job statement for band 5 occupational therapists which describes a band 5 occupational therapist as an autonomous practitioner (NHS Employers 2012). Despite, perhaps subconsciously, calling the band 5s therapists "students", two of the supervisors contrasted the expectations placed on band 5s across the MDT. Band 5 nurses, for example, may be in charge of a ward for a shift whereas band 5 therapists are very much viewed as probationers or subconsciously as "students". This may be an anomaly of Agenda for Change. The former nursing grades corresponding to band 5 were grades D and E, grade E being the grade of a senior staff nurse who might well be heading up a shift. In the AHP descriptions, band 5 corresponds to the former grading; basic grade, which was very much viewed as a development grade. This was the context of the first polarized super-ordinate theme; autonomy versus risk

The participants were asked about their own transitions into practice and most could identify experiences and feelings not dissimilar to those of the new graduates interviewed in phase 1. The exception was 63 Betty whose first post was in a service where she had been employed as an occupational therapy assistant for some years prior to commencement of her training and had undertaken placements as a student. Her maturity, life skills, experience as an OTA, familiarity with routines and role confidence appeared to ease her transition. All could readily recall their formative experiences, the challenges and achievements of transitioning.

The participants were very experienced with an average of 17.5 years in practice. They evidenced a considerable variety of past employment, post-graduate education, roles and special interests. All had provided clinical supervision for staff at a variety of grades and two were involved in supervising staff from other professions. A surprising aspect of this finding was that only one of the supervisors (63 Betty) had engaged in any formal training on staff supervision, until very recently. Four had completed Preceptorship training although only one had acted as a preceptor. It appeared that promotion to band 6 and 7 posts was based primarily on clinical skills and that supervision was something that came along with promotion, though all of these participants had been in promoted posts prior to the implementation of Agenda for Change or Preceptorship. Several equated training in clinical supervision with training in student practice education placement supervision. One participant described accessing training in clinical supervision as being like "hen's teeth". In contrast, practice educator training is free, provided locally, well supported and readily accessible. As it appeared that the supervisors were in part basing their clinical supervision of band 5s on their experience training and working as practice educators, their subconscious conceptualisation of band 5s as "students" was perhaps not quite so surprising. In the absence of formal training in clinical supervision the other resource the supervisors drew upon in developing expertise in supervision was modelling their practice on past experiences of their own supervision. This was an interesting finding given that the evidence from the band 5 interviews had suggested the critical importance of the band 5 – supervisor relationship and the provision of effective supervision in facilitating a successful transition into practice.

Table 12: Demographics and characteristics of the participants in phase 2 of the study.

	61 Jean	62 Susan	63 Betty	64 Angela	65 Lucy	66 Abby	67 Lara
Age	35-39	30-34	45-49	25-29	35-39	45-49	50-54
Gender	Female	Female	female	female	female	female	female
Time since graduation	16 years	11 years	15 years	8 years	16 years	27 years	29 years
With current employer	15 years	10 years	6 ½ years	8 years	5 years	3 years	3 years
Band	6 (part time)	7 (part time)	7	6 (rotation)	7	7	7 (part time)
Practice educator	Yes	No	Yes	Yes	Yes	Yes	Yes
Preceptor	No	No	Yes	Yes	Yes	Yes	No
Current post	Elective orthopaedics	Care of the elderly	Community rehabilitation	Specialty in Trauma	Community rehabilitation	Medical	Specialty in Psychiatry
Past posts	Rotations in physical rehabilitation	Social work Rotations in physical rehabilitation	Social work Mental health Acute assessment	Band 5 rotation	Band 5 rotation Oncology & palliative care	Band 5 rotation Learning disability Physical rehabilitation	Paediatrics Psychiatry Private practice Education
Known to researcher	Yes	No	Yes	Yes	No	Yes	Yes
Nature of past researcher / participant relationship	Practice education visits	None	Practice education visits	Lecturer / student Practice educator	None	Assistance for project	Colleague and friend

4.6.3: Autonomy Versus Risk.

Figure 10: Abstracted themes contributing to the super-ordinate theme; autonomy versus risk.
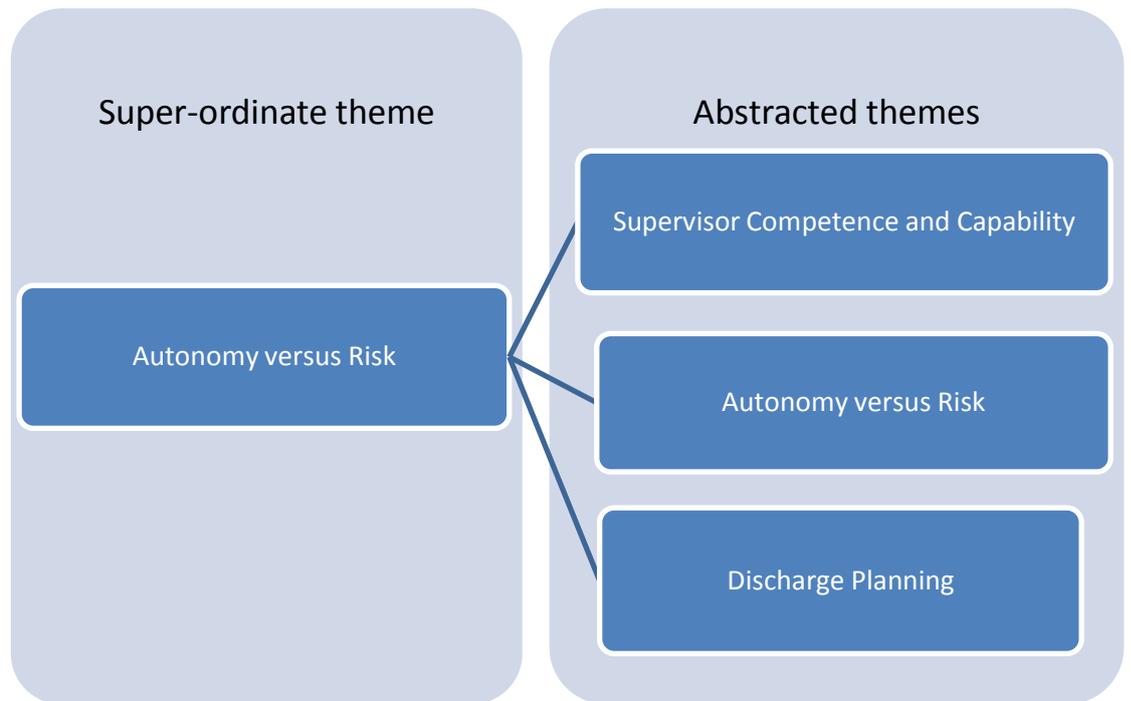
This super-ordinate theme was called autonomy versus risk. It was recognised that, in providing

support and supervision for the band 5 therapists, the participants were using judgement to

balance a desire to foster autonomy within the new graduate band 5s with an evaluation of the

risk to the patients and to the band 5s from permitting fully autonomous practice. Autonomy

versus risk was a quite explicit theme running all the way through analysis from the raw data.

Two other themes, discharge planning and the self-perceived competence and capability of the

supervisors during their own transition and later, were closely linked to autonomy versus risk.

Discharge planning for complex patients was perceived as presenting risks, primarily for the

patient, should things go wrong on discharge, but also for the band 5 therapist in terms of

increased anxiety, increased demands on their thinking, reasoning and judgement and potential

for conflict within the MDT or with patients and carers. The participants' own self-perceived

competence and capability, built on their experience, disposition and confidence appeared to

impact on their judgement in the degree of autonomy and the speed at which autonomy was granted to the band 5s. At times there appeared to be a slight conflict between what the supervisors would like to do to support the band 5s in an ideal situation and what they could pragmatically do given the demands of service delivery. The feedback, which was so valued by the band 5s, could provide two-way reassurance as evidenced by 65 Lucy

65 Lucy

You do have a lot more dialogue in the beginning don't you? Because…well I think you need…they need more support plus…its great if there is because then they come back to you and say I did this is that OK? And its reassurance um…I think we would use it in supervision, obviously you would have it formally as well. We do caseload cover so we talk through the cases, and talk about what we've done and what we maybe…what maybe could be done as well, or what might be helpful

The perception that initially new graduates require extensive support in coping with the complexity of practice was widely acknowledged but often qualified with a concern that autonomous practice was being impeded, for example in the quotation from 63 Betty below.

63 Betty

When we are in a position where we're taking a Band 5 we're very careful about what we send them off to do and very careful about how we plan and work with them and supervise them. Maybe we do too much, I don't know, because I mean <NAME BAND 5> did incredibly well, it could be her personality but I think it was…maybe that you know we were able to plan for her coming and know that it was her first job and knowing that it was complex and support her really well through the first sort of four/five months.

64 Angela

I think I have had one who was like a brand new graduate I think…yeah, yeah she was um…and I think being prepared it was fine, that they came and asked us questions and I felt quite confident to kind of…its quite difficult because I did at the start, I was like "its brand new graduates, I'll go up to the ward and make sure she knows everything" like review the referrals. But then…you kind of become a spare part almost because you don't need to go and stand over them while they take an assessment. But I kind of felt like leaving them there was a bit extreme so it's kind of trying to get the right balance between it. So in the end I did go up.

64 Angela discussed situations where she wanted to give the band 5 therapist autonomy but recognised that in some situations the MDT will put pressure on new therapists over discharge planning.

64 Angela

You've kind of got a newly qualified Band 5, you want to give them the freedom to go and do it but then there is still some of the wards…like, oh a new Band 5 can you see this patient and discharge tomorrow

This perception was supported by the account of 66 Abby

66 Abby

They're up on the ward, they're working with a patient and they've got medical staff or nursing staff breathing down their neck for a decision and generally it's around discharge

62 Susan expanded below on the perception of new graduate therapists being tested out by members of the MDT and explained for the researcher why the band 5s might initially have difficulties in integrating fully into the MDT. 62 Susan and 64 Angela, although employed in different facilities both highlighted this testing out process. In 62 Susan's account the testing out was conducted by female members of the MDT which contrasted with the researcher's understanding of conflicts with male members of the MDT implicit in some of the band 5 accounts above. On reflection the accounts described by the band 5s were of relatively open and direct conflict whereas what 62 Susan and 64 Angela described was somewhat more insidious.

62 Susan:

I think em, something that is, is really challenging for em, starting in the in the wards, is there's definitely a, em, a feeling of, they can be like kinda em, just trying out, like testing out, em, you know, this new person on the ward ...

Researcher: *Aye? (laughing)*

62 Susan: *Especially the nursing staff can be really quite horrible; especially the female population can be very bitchy em, so....*

Researcher: *...no, never (laughing) I can't believe that one*

62 Susan: … and it can be really quite difficult for, you know, a new start in a new area, they are em, getting used to the OT department staff and then they are having to go and work on this ward where nobody is really helping them out and the first month, I would say, on most of the wards is, they are testing you to see em, how much, how far they can push you or em, you know, just what your abilities and things are.

In facilitating autonomous practice in their band 5s, the supervisors appeared to be influenced by their own experiences in transitioning, as well as evaluation of the professional development of the band 5. The supervisors also appeared to value what the band 5s could bring in terms of skills. Frequently mentioned were life skills and maturity but also skills in literature searching and using evidence.   The supervisors were generally self-deprecating and perhaps lacking in confidence in their own use of information technology and ability to search for and critique literature.   This has some resonance in the professional literature where studies have demonstrated a hesitation to adopt evidence based practice within the profession, linked with limitations in skills in critical analysis of literature and access to or use of information technology (Bennett et al 2003, McCluskey 2003).   The supervisors valued the ability of the younger therapists to engage with evidence based practice and this appeared to be one way the younger therapists could demonstrate their competence.   There was perhaps a dichotomy in the expectations placed upon the new graduate band 5s between accessing knowledge from their supervisors, almost exclusively, in their early days of practice and the supervisors valuing other ways of the band 5s evidencing effective practice, based partially on the supervisor's self-perceived limitations. There was also potentially the issue of band 5s modelling practice on their supervisors for whom explicitly integrating evidence into practice had relatively low priority.

63 Betty

Yeah its…those are things that actually <NAME BAND 5> was really good at anyway, I mean she was really interested which is probably why she wanted to do the critiquing of research articles with us because she was really, really interested in, you know, what's been written about this, who out there has been interested in this ahead of me and what have they found which is great.

Um…I don't think we're as good at that, people from my sort of uh…from years ago who trained a long time ago I don't think we're particularly good at that and we should be. You know…

Therefore, from this theme it was identified that supervisors used judgement to balance risk with facilitation of autonomous practice. This was particularly significant in facilitating competence and capability in discharge planning. There was evidence that developing autonomy was not always aided by the MDT. Supervisors were influenced by their own transitioning experience and self-confidence when progressing autonomous practice in their band 5 therapists.

4.6.4: Support for Competence: Managing Anxiety.

Figure 11: Abstracted themes contributing to the super-ordinate theme; support for competence: managing anxiety.
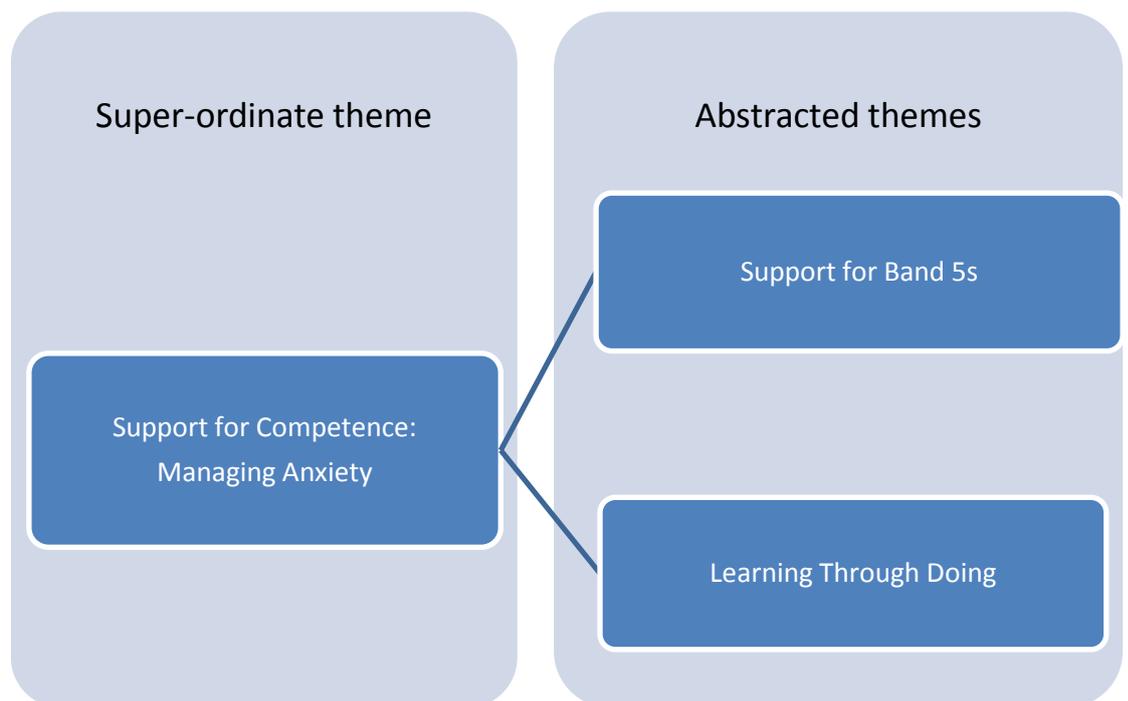
This super-ordinate theme was called support for competence: managing anxiety. From the band 5 interviews above it was recognised that the band 5 therapists, when asked, frequently expressed their anxiety, initially, in terms of their lack of competence, that is, their lack of existing skills and knowledge. It was only on questioning that they would identify, express or recognise

their anxieties in terms of their limited capability, that is, their ability to adapt to situations, improve performance and generate new knowledge.

The supervisors recognised and identified with the challenges of transitioning. There were a number of different models or beliefs about the most effective method of providing supervision and, on analysis, in each case this was modelled on the supervisor's early experience of supervision. 67 Lara who worked in a highly specialised unit supervised 55 Helen who was something of an outlier within the band 5 participants. 55 Helen's supervision arrangements within her MDT have been detailed above but the use of psychotherapist facilitated team supervision/reflection and the style of individual supervision supported by 67 Lara clearly linked back to 67 Lara's formative experiences working as a basic grade in a highly specialised training post in play therapy. 63 Betty had negotiated a system whereby the band 5s had 2 supervisors, one for line management and one for professional development. Her whole team had adopted this model and again it was based on her formative experiences. Other supervisors favoured a top-down approach to supervision, i.e. supervisor led, or a bottom-up, i.e. band 5 led or a co-constructed or consciously laissez-faire approach whereby the supervisor was able to skilfully respond to individual needs very flexibly. 67 Lara explained her approach to formal one to one supervision which was characterised by the researcher as bottom up/co-constructed.

67 Lara

Our last supervision sessions were 2 hours so again that varies in terms of what's needed and…you know? And I'm not a tick box kind of supervisor either so…a lot of mine is letting her talk and I let her record her own notes and sign them off because I'm interested more in what she records, and what she takes from the supervision session, and what was of value to her in that process rather than what's of value to me, otherwise really the supervision will be what I take from the supervision and actually that's not really that relevant to me, what's relevant to know is what she's taken from that, what has she heard me say when she's asked a specific question? What learning has taken place? What is going to be implemented as a result of it? What has she now got to do? And we both have a checklist of things that we've got to do, things that we've agreed to do in supervision. But yeah its more interesting to see what it is that she's got from that experience rather than what I've got from that experience

66 Abby described an approach to formal supervision which was characterised by the researcher as top down.

66 Abby

Supervision with the staff is very important because you're pulling that member of staff out from..., I'm working within a team and they integrate very well generally as a team, and they feed off one another, and you can see little…perhaps some negative things coming through. They're a little bit flippant in their comments, and they're not quite as accurate, but when you actually see them on a one to one basis through supervision, that's the time that I feel is to hone in on that and concentrate on that and just make them aware of, you know, perhaps for example, you maybe hear them they're not as professional as they could be. And whether its maybe not appropriate to…pull them up on that…I just think supervision sessions are useful for that so that's really important

Each supervisor acknowledged the importance of effective supervision and saw this as being critical to the development of band 5 therapists. While the methods of providing supervision varied, the nature of the supervision described by the participants in this phase of the study was largely consistent with the supervision experience described by the band 5s. The supervisors provided high levels of support initially which tailed off as the band 5s developed autonomy (or the supervisors gained confidence in the band 5s ability to practice autonomously). Initially, as frequent as daily informal supervision or shadowing was made available. The supervisors concentrated on developing confidence and communication skills or reducing anxiety by rehearsing and receiving feedback on existing skills, as the band 5s built a caseload. Formal supervision could be as frequent as weekly and tailed off as the band 5s developed. In a large part formal supervision was geared towards development of thinking and capability, as outlined below, but would generally include a review of cases, perhaps just the most challenging cases latterly, and an opportunity for reflection and collaborative planning as well as induction into routines and processes. Learning through doing was strongly valued by supervisors in their account of this stage of band 5 development as was openness in communication and a questioning disposition. In the lengthy quotation below 61 Jean describes some of her ideas about supervision. What she also indicates is that as a supervisor, she perceives herself as being

the primary source of knowledge for her band 5s. This is potentially an issue when the band 5s model their practice and their future supervision on their early supervisors.

61 Jean

I think I am always concerned a little bit when people don't question, because I would not expect them to know everything

I think, you know, you know, there is no point in giving yourself loads of work if you just ask the questions, "where do I find this" or you know, or you maybe come across this before, so what kind of you know, what kind of equipment did you use or, you know, have you ever had any kind of experience of this kind of equipment before, you know, so, a lot of questioning, a lot of you know, coming to us and asking, you know and then going perhaps and problem solving themselves and working it out and just actually doing the job

What I tend to do with the newly qualified folks is maybe initially shadow them , just so you can kind of observe what they are doing and give them guidance, you know, maybe draw their attention to things that they could perhaps be reflecting on or thinking about more, and then once you kind of, you know they are quite confident and happy then they obviously spread their wings and go off and carry their case load themselves but you are always there and in my experience, you know, the students and the newly qualified staff do tend to come and ask questions, eerm, although I do encourage that, you know, I actually verbalise that I would much rather, you know, you came and asked if you weren't sure, eerm, so I think, and then I give them the chance and the freedom to go sort of forward and make decisions for themselves and you know, not rely on you too much because I think that can be wrong.

In summary, the supervisors were well aware of the challenges of transitioning and the associated anxieties. They viewed effective supervision as being a method of supporting their band 5s through transition and clearly put a lot of thought and energy into providing this. There was little commonality in the kind of supervision each supervisor provided although there were common components. The outcome of effective supervision was viewed as confident autonomous practice. Learning through doing, reflection on practice and case based reasoning were particularly valued.

4.6.5: Support for capability (engaging with complexity) versus shock of practice (withdrawal into procedure).

Figure 12: Abstracted themes contributing to the super-ordinate theme; support for capability (engaging with complexity) versus shock of practice (withdrawal into procedure).
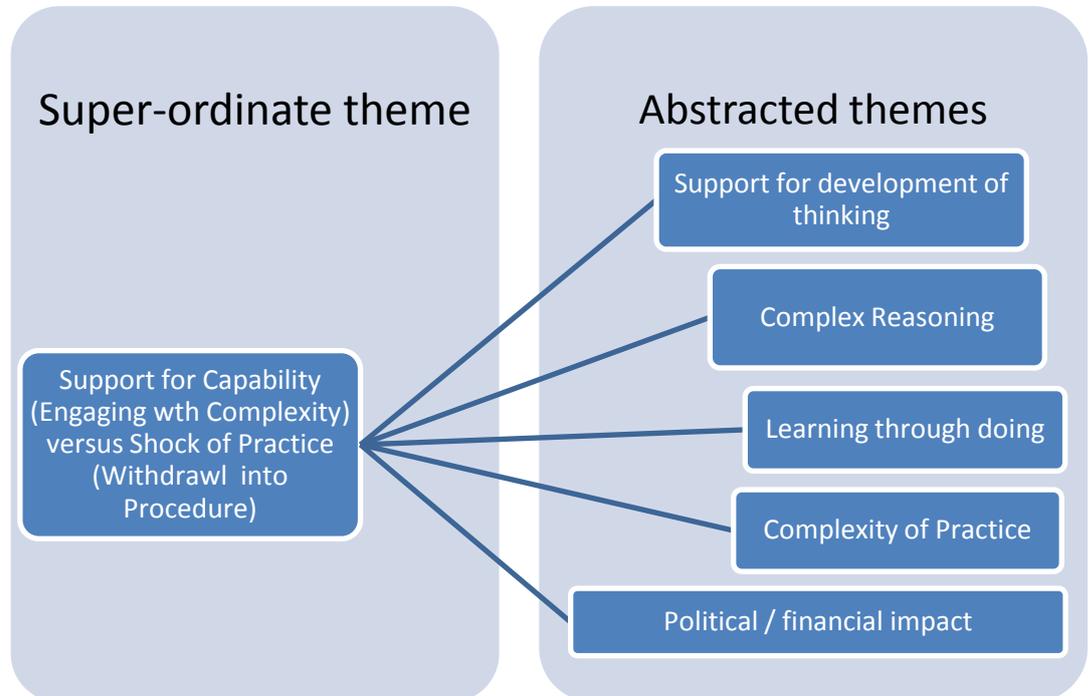
This super-ordinate theme was called Support for Capability (Engaging with Complexity) vs. Shock of Practice (Withdrawal into Procedure). In identifying and analysing the data abstracted to this theme it was recognised that there was an overlap with the findings from the analysis of the band 5 interviews and that the separation between this section and the preceding section was somewhat artificial, given that some of the strategies identified in aiding transitioning were common to both. However to address a number of the questions posed by the study it was necessary to abstract the data to a separate super-ordinate theme.

The overlap with the findings from the band 5 interviews can be listed as:

1. Supervisors expected Band 5 therapists to engage with complexity. Band 5s may be offered additional support initially but the universal expectation of the supervisors was that they would fairly quickly pick up caseloads that would expose them to the complexity of practice.

2. Band 5 therapists were expected to engage in forms of thinking and reasoning beyond that which the literature suggests is undertaken by novice practitioners

3. Learning through doing was a strongly supported strategy in the development of thinking, reasoning and capability.

4. Reservations were raised regarding how prepared the new graduate therapists were to understand politico-financial constraints on service provision and undertake pragmatic reasoning. Some supervisors described "reigning in" band 5 therapists whose expectations of what services could provide far exceeded the practical reality.

The overlap with the section above can be summarised as

1. Clinical supervision was the primary method employed by supervisors to facilitate thinking, reasoning and capability. Each supervisor employed a unique approach to supervision although common components were readily identifiable.

2. The supervisors supported learning through doing as a development strategy.

3. Learning through modelling / shadowing and through questioning / accessing reason were also strongly supported.

There were a number of differences in the abstracted themes or additions to previously abstracted themes.

With regard to the thinking required of band 5s; the supervisors aided the understanding of the researcher by adding further expectations to the complex thinking that the band 5s were expected to undertake. Cultural competence was highlighted by some supervisors. Firstly this related to working with people from ethnic minorities in the surrounding area, some of whom required translation services in order to engage with treatment. Secondly it related to working with particular diagnostic groups, for example people with eating disorders and thirdly to working with groups who may be unfairly stigmatised such as frail older people. An associated

expectation highlighted by two supervisors was fairness and equity in provision. It could be suggested that the second of these would be particularly challenging for new graduate therapists who perhaps have limited insight into the politico-financial constraints on service provision.

Two themes from phase one of the study that were echoed in phase two but which offered a different or supplementary viewpoint were assuming ownership of patients problems and the concerns associated with using predominantly procedural reasoning. 61 Jean and 62 Susan highlighted that new graduates need to move on from attempting to provide everything for everyone and prioritise what is pragmatically achievable

61 Jean

When you first start working your whole world is your ward and your patients and then you start becoming aware of a wider picture (laughing) and the impact that things,(.) that maybe you don't have any control over necessarily, how that then impacts your practice.

62 Susan

You em, need to look at what's manageable and realistic and then you can always in your reflections and things write down and acknowledge what idealistically you would have done and you would have liked to have completed with a patient but just be aware that it's possibly not achievable because of this and that em, ... just be aware of the constraints at the time and make sure that it's not going to be em, impact on the patient or anything at the time but just be realistic.

These accounts and others from the supervisors aided the researcher in appreciating the conflict faced by band 5s entering practice between their internalised ideas about patient or client-centred care from academia and the reality and expectations of practice.

With regard to procedural reasoning the supervisors were fairly unequivocal. Procedural reasoning was adequate in certain specific areas, for example, 61 Jean had elective surgery patients who were on critical care pathways, but the expectation was that band 5 therapists would be capable of engaging in more advanced forms of reasoning. There were concerns expressed about those band 5s who sought to limit their thinking, reasoning and practice through the adoption of predominantly procedural reasoning where this was inappropriate

62 Susan

They have to do a lot of decision making em, which can, can often be quite difficult, you know when it's, it's again, it's em, sometimes easier in university when you are given case studies and things when it's black and white on a piece of paper you can quite easily slot them into this situation or that situation but unfortunately with human beings, they're quite complicated and they don't often fit into a box so em, trying to make em, you know, specific decisions can be really difficult and em, quite challenging for some people, and a lot of responsibility

64 Angela reported that band 5s who were struggling with transitioning may be rotated into one

of the few areas where procedural reasoning may be the predominant type of reasoning

expected of therapists. She saw the drawback of working in this area as being erosion of other

kinds of reasoning.   However it could be suggested that in order to build confidence,

communication and role identity as well as induction into routines which seem to be some of the

key building blocks of transition, this might be an appropriate strategy.

64 Angela

Elective orthopaedics, a very structured area and it's literally like "someone has a hip replacement this is what you do". Quite often we have … we've had a couple of times where we've had basic grades who've maybe struggled quite a lot and that's kind of, we'll put them there for a while and just purely work on, like I say, communication skills or like processing through, they don't have to question what they're doing, this is what you do. So they have maybe gone there … They maybe find it easier when there is that but then I think you almost lose your clinical reasoning a bit in that kind of situation.

The findings from analysis of this super-ordinate theme supported a number of the findings

recorded in earlier sections. Supervisors highlighted further forms of advanced reasoning that

they expected of the band 5s. They re-emphasised the perceived limitations in the pragmatic

reasoning skills of the band 5s and linked this with facilitation of practice that was achievable

within existing constraints. They supported the perception that band 5s tend to have unrealistic

expectations of themselves and what their service may provide. Consistently the supervisors

emphasised that, in order to practice autonomously, the band 5 therapists needed to adopt

advanced reasoning and that adoption of predominantly procedural reasoning was insufficient in

most practice settings.

"I always get the feeling that when people come out of college; at that point it's almost make or break isn't it"

63 Betty

As exemplified by 63 Betty's statement the supervisors fully recognised the importance and the

potential effect on band 5s future careers of successful transitioning.

Section 4.7: Phase 3, The Managers

"One of the things I really do enjoy in my job, if I'm thinking of the management side, I do like mentoring and supervision of students, staff, and seeing them grow and develop, and I guess this is part of it isn't it? I mean it can't not be ... it's very rewarding when you see someone move on and up a gear".

71 Emily, a Band 8 occupational therapist, study participant and professional lead.

4.7.1: Introduction.

In order to meet the aims of the study it became apparent that it would be essential to interview a group of staff with strategic responsibility for the recruitment, retention and development of band 5 occupational therapists. Service heads and leads determined the recruitment, induction and supervision policies of their departments. It was thought that their perceptions and expectations of graduates, new graduate practitioners and transitioning would add important understandings to the study. This section therefore contains the findings from the analysis of data obtained from semi-structured interviews conducted with five band 8 and one band 7 occupational therapists who had experience of recruiting and managing new graduate band 5 therapists.

In this section the findings from the analysis of the interviews conducted with the participants included in phase 3 of the study are presented. The section is structured in a similar way to Section 4.6 above. Table 13 below summarises the characteristics of the six participants in phase 2 of the study and the nature of any relationship with the researcher. All of the participants in this phase of the study were female and their ages ranged between 43 and 58 (median = 50.5).

Four of the participants were casually known to the researcher, one was a former student and one participant was previously unknown. The participants in this phase of the study were perhaps slightly atypical in that three of them had trained as mature students and only one (71 Emily) had worked at a senior level in any other health board than their current employer. The participants therefore had extensive experience of occupational therapy but, with one exception, this was within a fairly limited geographical context.

The section is constructed around three super-ordinate themes which are:

1. Preparation into Practice;

2. Support for Competence versus Anxiety;

3. Support for Capability versus Shock of Practice.

The 2nd and 3rd super-ordinate themes are identical to two themes abstracted from the interviews conducted with the supervisors in section 4.6 above. The perspective of the managers was different but the concerns were similar to those of the supervisors

4.7.2: Characteristics of the Participants.

As in section 4.6.2 above some of the findings generated from the interviews with these participants lay outside the strict focus of the study but added context. A theme from preliminary analysis of the supervisors' interviews that was carried forward into the interview schedule for the third phase of interviews was the issue of formal training in clinical supervision or how therapists gain skills in supervision and how good quality supervision is ensured. Each of the managers was supportive of effective clinical supervision and appeared to have comprehensive supervision structures in place. From analysis of the interviews it appeared that, in developing supervision skills, three mechanisms were in operation; firstly learning through

doing, secondly learning through modelling on others and thirdly modelling on student practice education processes. 72 Grace expanded on this

72 Grace

I think again probably I was quite lucky in that right from having my first job you know, I didn't have anybody above me but I had two very experienced therapy assistants beneath me so I had them for supervision, I have always had somebody to supervise one way or another, whether it has been a therapy assistant or… and I think I have just built up to now that I am supervising band 7's probably that is quite a scary thought when you first graduate that one day you might supervise a band 7, but I haven't found it difficult

72 Grace

I think it is just part of the job and the routine, and also not so much in the social work post because I didn't really have any supervision there but when I moved to NHS, I moved to structured supervision even though I was in a community hospital and I worked alone, part of a team, and the lead of the team you know, even though they were 80 miles away, every two months, you would have your supervision in a structured format that I recognised from being a student really and you know that structured format, that was used for my supervision is the same structured format, a set of different paperwork, but it is the same structure that I have used with the staff that I supervise so, you know, and I would think the staff that I supervise wherever they go on to work, they will take the same type of format and it is the same type of format that we use with the students, that we take slightly different bits of paperwork but you do the same thing.

One related theme was about how training was organised for staff. Training budgets and responsibility for organisation of training appeared to be devolved to band 8 therapists. Each described regular training events that they had organised for their staff including band 5s. There was limited consistency across the services on how this was organised, some managers paired up their staff groups for training events, some, mainly due to geography didn't. It appeared to the researcher that there was a preponderance of in-service or in-house training taking place. On initial analysis the researcher questioned the value of in-house training in comparison with external training but, on reflection, this may have been biased by the researcher's own experiences. Accessible information technology, professional online social networks and repositories of knowledge may have tipped the cost-benefit balance towards in-house training although reservations might remain about the benefits of information exchange and building relationships in travelling to access training.

The managers were asked to recall their own transitions into practice. Each was able to clearly recall their initial experiences of professional practice despite the elapsed time and some had fairly traumatic tales to tell regarding induction practices in the 80s and early 90s.

74 Jill

Two of us started together alongside a newly promoted senior who'd gone from Band… basic grade to senior 1, and induction – from what I can remember involved of, "Your wards are that way", and that was all.

76 Monica

It was horrible. When I graduated my situation was such that I would have liked to have stayed on for my fourth year but financially I couldn't afford to and if I got a job that was it, I had to take the job. And I got the first job I applied for. So that's where I ended up. And I had, it was a temporary post in medical, which is always a bit frantic. And I went into a post that there should have been three people and within two weeks there was me. And this is the first time I'd ever worked in medical. And the manager at the time when I went to her and said "I can't cope", told me "Well, you'll sink or swim" and, well for my own bloody mindedness I suppose I thought "I'll swim", but I only just swam, it was very, very hard.

Having undergone challenging transitions themselves, the participants appeared motivated to ensure that the new graduates entering employment with their services would have a better experience. For example five of the six participants managed services where Preceptorship seemed to be well embedded. There was some acknowledgement of the pressures and changing demands and expectations on band 5s but on the whole the feeling appeared to be that the transitioning experience had improved.

74 Jill (speaking about her own transition)

We were able to make more mistakes than the graduates are able to make now – minor mistakes in terms of making a wrong judgement about, you know, how well somebody could cope at home… the system doesn't allow the graduates now to make that… everything's much quicker, much more supervised, different standards, but we were able to make errors of judgement if you like, in a much more… and I'm talking about really minor things… not harming patients in any way, but about trying to judge whether somebody's going to be able to cope at home or not. We were making that entire judgement as basic grades just out of college, which again, looking back I think, my goodness we knew nothing, but we learned by making those errors

71 Emily (speaking about new graduates)

And you're suddenly thrown in with a whole ward of 20 beds…60 beds at <NAME HOSPITAL> um…and it's like it's overwhelming. And it's being able to support them in sort of buttoning that down and being able to make those priorities. You know some of them come and want to do everything for everybody. And the reality is you can't you know it's just not achievable. And it's trying to keep a lid on it so that they can actually manage the job. It's the management of the volume of work that is one of the biggest things that I think they need to learn

Having contextualised this phase of the study by outlining some of the relevant practices and

procedures as well as attempting to give a flavour of the experiences and dispositions of the

participants the next three sections will address the super-ordinate themes abstracted from the

data.

Table 13: Demographics and characteristics of the participants in phase 3 of the study.

	71 Emily	72 Grace	73 Amy	74 Jill	75 Lisa	76 Monica
Age	55-59	55-59	40-44	45-49	55-59	45-49
Gender	Female	Female	Female	Female	Female	Female
Time since graduation	36	14	21	26	20	11
With current employer	21	13	18	20	20	11
Band	8c	8a	8b	8c	8a	7
Practice educator	Yes	Yes	Yes	No	Yes	Yes
Preceptor	Yes	No	No	No	No	Yes
Current post	Service Lead	Head	Head	Service Lead	Head	Team Lead
Past posts	Physical rehabilitation	Learning disability Social work Physical rehabilitation	Psychiatry	Physical rehabilitation Education	Physical rehabilitation	Physical rehabilitation
Known to researcher	Yes	Yes	No	Yes	Yes	Yes
Nature of past researcher / participant relationship	Practice education visits/meetings	Practice education visits/meetings	None	Meetings	Practice education visits/meetings	Lecturer/student Practice education visits

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4.7.3: Preparation into Practice.

Figure 13: Abstracted themes contributing to the super-ordinate theme; preparation into practice.
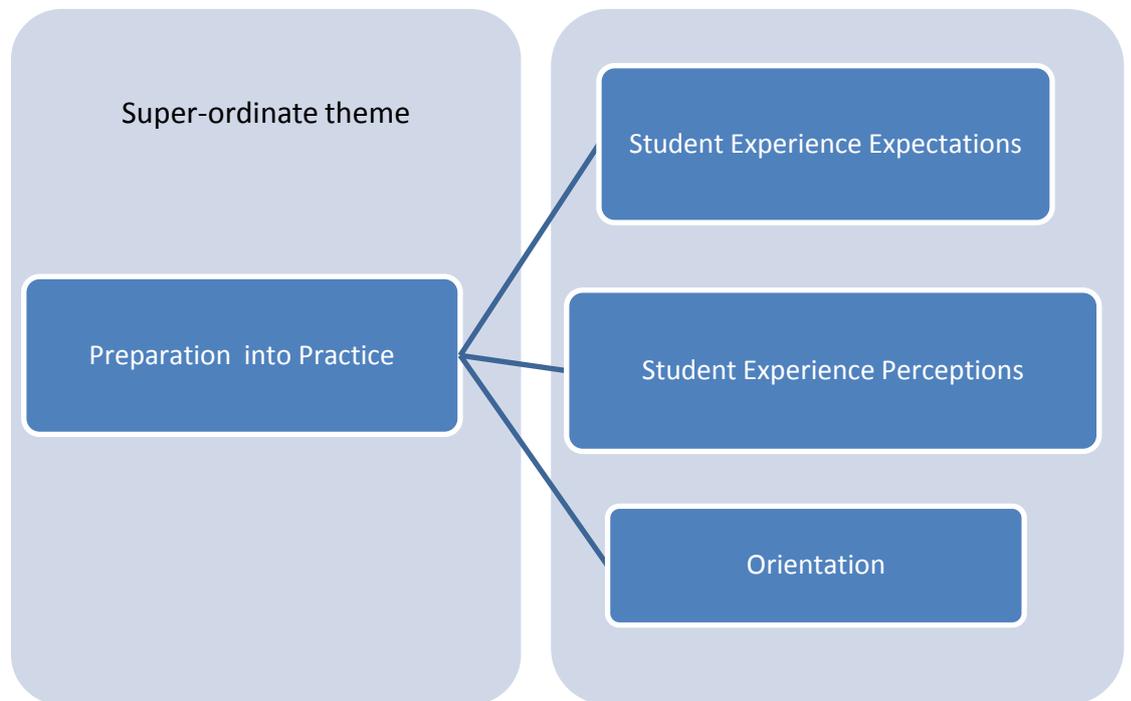
This super-ordinate theme was called Preparation into Practice. In order to address a number of the questions posed by the study it was necessary to examine the readiness for practice of occupational therapy students, in particular their thinking and reasoning skills. The participants in this phase of the study; the managers, had strategic responsibility for recruitment, training, supervision and retention of band 5 therapists. Three of the six had assisted their local university in student recruitment to the undergraduate course, one had six years of experience as an academic, and one supported a student inter-professional education programme. All had been student practice educators, three were practice education co-ordinators and all provided student placements within their services. Two had acted as a preceptor and three of the others signed off on or otherwise supported Preceptorship. It was therefore felt that this group of participants would have valuable perspectives and opinions. The three themes that were abstracted to this super-ordinate theme were the managers' perceptions of student preparedness, the managers' expectations of students transitioning as new graduates and the practical measures they put in

place for new graduates. What was of particular interest to the researcher in addressing the questions posed by the study was any conflict or gap between perceptions and expectations and how this was addressed in orientation.

Unsurprising perhaps was the universal support expressed for student practice education. This was viewed as being of critical importance in the preparation of graduates. On reflection, there may have been some positive bias towards practice education in this group of participants. Their services are on the whole enthusiastic about providing student practice education placements and it might have been instructive to have a participant in this phase of the study from a service where practice education placements are more difficult to obtain. Although not the focus of this study, obtaining practice education placements has been an issue for the profession in recent years and it might have been enlightening to investigate the perceptions of such a participant and effects on recruitment.

The managers emphasised the importance of practice education to the development of reasoning in students. For example, they saw new graduates pulling on cases from student practice education to supplement their case based reasoning. For new graduate band 5s their quality of clinical reasoning on entry to the service depended to some extent on their previous student placements. Past student placement experience had the potential to improve confidence and speed of acclimatising to routines.

73 Amy

Yeah I think initially it will depend what practice placement experience they've had. If they've got relevant cases that they can bring into their current place of work I would imagine that they would be doing that. I certainly seem to recall doing that

75 Lisa

I probably think it's all down to the placements they've had prior to coming in. If they had a hospital placement as a student, I think they can come out thinking "that's fine, yeah I know what I'm doing, I can go onto ward, I can get information, I know I have somebody in band 6's I can go to" and I think if they find it that they're clinical reasoning seems to be better. I think that if they're placed in an area where they haven't got expertise, say it's in rheumatology or stroke or something, I think it's a big difference and I think they revert very quickly, the majority of them,

into student mode, "I don't know, somebody tell me" and I think these are the girls that take a bit longer to settle which understandably because they feel it's a specialist area and they don't want to hurt anybody, don't want to do anything wrong, "better make sure that I'm right" and these are the ones who'll probably be supervised far more intensely as well. So it's kind of a mix because we're supervising them more intensely and they're asking as well so, chicken and egg sort of thing a wee bit.

75 Lisa's perception that new graduates who are lacking in confidence and familiarity withdraw into, as she sees it "student mode" was supported by other managers although they were more likely to describe this as withdrawal into process or procedure, "tick box" or recipe type thinking. Other managers supported the perception developed in phases one and two of this study that the first thing that frequently needed input was the self confidence of the new band 5s.

New graduates entering the workforce were perceived as being skilled in reflection and in information searching. With regard to information searching, this may have been relative to self-perceived weakness in experienced staff members and the reflection referred to was generally reflection on action. There was some conflict here with the phase one study as the band 5s themselves perceived themselves as requiring development in their reflection and band 5s who were struggling with transition demonstrated some passivity in engaging with reflection.

Managers identified a number of characteristics expected of the new graduates recruited to their services. Key expectations included skilled communication, confidence and capability. Knowledge and practical skills were seen as being desirable but could be developed in practice. New graduates most difficult for the managers to transition were those who lacked what they described as a suitable disposition. This may have linked to capability. Critical thinking and clinical reasoning skills were valued and graduates who were able to demonstrate these attributes at interview were more likely to be employed.

73 Amy

From interview ... the ones that we've selected are really quite able to respond to quite complex ideas and yeah work through and describe you know appropriate scenarios and breakdown their thinking, which probably was most impressive that they were able to talk you through something and breakdown, you know, this is how they would approach this and that, logically. Maybe they didn't remember absolutely every single thing but they had (.) it wasn't just rote, they actually had an understanding of the scenario or the situation or whatever it was and they could give you a breakdown of how they would be thinking themselves, but also what they might expect of a reaction from somebody else, that kind of thing.

One area of where the managers consistently expressed reservations about the new graduates was dealing with unrealistic expectations and lack of awareness of politico-financial constraints. It was stated that students are protected from the impact of small "p" politics on practice both at micro and macro level. This supported understandings gained from earlier phases of the study.

Extensive induction and orientation arrangements were outlined. The managers were responsible for arranging induction for new staff and ensuring mandatory training such as manual handling, fire and CPR was undertaken. There was some optional training offered as part of induction but uptake was inconsistent. This was interpreted by the managers as a time management and prioritisation issue.

74 Jill

The manual handling, food hygiene, resus, fire, vulnerable adults… all the staff have to do… manual handling and resus we do as a service; food hygiene was done as a service, so we get a trainer to come and do us, or we've got cascade trainers within our teams. Fire we do on a site basis; vulnerable adults we've done in conjunction with the physios. So that kind of covers all the basic stuff. We act as a training directory, so if any of the staff want to do… we don't stipulate they have to do managing aggression. It's not a huge issue in our service, but if some staff want to do it to feel more comfortable, they just access it through NHS <NAME Board> training, and any of the other… we've done some stuff, done computer training, other things that are pertinent to their needs

As the services were generally arranged in hierarchies for supervision, only two of the managers had direct clinical supervision for band 5 therapists. The other managers viewed their roles as

setting up structures and processes conducive to straightforward transitioning, clinical supervision of band 5s was delegated to band 7 or band 6 therapists.

73 Amy

I'm not directly supervising Band 5's now ... my role now in terms of supporting them I think, I feel, is about trying to be as clear as possible about the structure within the service and how things kind of operate so that they can find their way round those things without kind of spoon feeding but giving them as much idea of what the structure is and how things work, how things operate and how that can make things easier for them. Trying to be consistent a lot of the time I think as well because that can be confusing when people get different responses and different direction.

Where there were band 5s having problems with transitioning the managers could support their band 7s, transfer the band 5 to another unit or provide direct supervision themselves.

4.7.4. Support for Competence Versus Anxiety.

Figure 14: Abstracted themes contributing to the super-ordinate theme; support for competence versus anxiety.
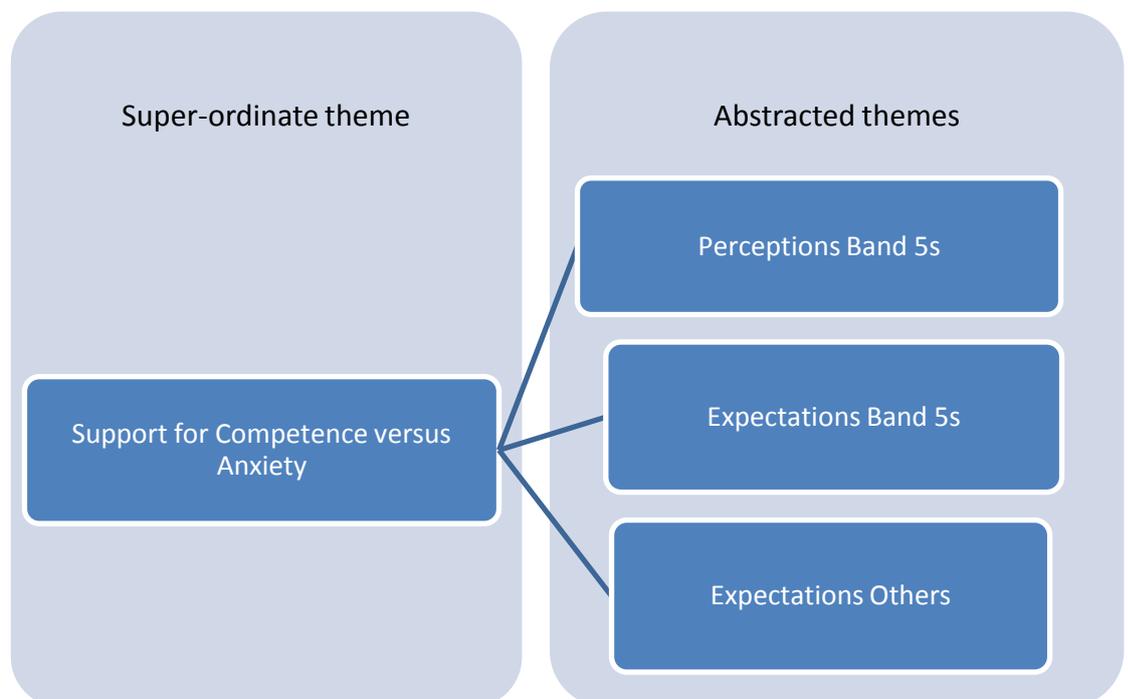
This super-ordinate theme was called Support for Competence versus Anxiety. As analysis progressed it became evident that data saturation was being reached for this particular sample.

This super-ordinate theme encompassed some similar understandings and perceptions to those gained from the analysis of the data generated from phase 1 and phase 2 of the study. The managers recognised that transitioning was a complex, challenging and anxiety provoking process for the band 5 therapists. A number were able to identify less than optimal experiences when transitioning themselves. There was something of a dichotomy emerging from their accounts of contemporary transition practices. Each stated that band 5s had much more in the way of support than they had had during their own transition and evidenced programmes like Preceptorship, eKSF and Flying Start as well as local initiatives. However it was recognised that in terms of complexity of practice, time constraints, knowledge and skills and accountability the expectations placed on band 5s were greater than in the past.

Each manager could describe recent experiences of band 5 therapists struggling to make the transition into practice, to the point where some band 5s had left the profession or moved to other posts and one was dismissed. It was not entirely clear to the researcher how common these experiences were. Anecdotally it would be unusual for a therapist to be dismissed but from phase one of the study it was apparent that in employment terms the band 5 therapists were very mobile and that problematic transitioning could be a factor in seeking a new post. The managers identified that it was difficult to predict at interview which band 5 therapists would do well and which would struggle. Factors that appeared to be protective or add resilience were past experience, for example placement; life skills, disposition, temperament, flexibility, effective communication skills, confidence and thinking skills. It was acknowledged that discharge planning and MDT conflict were potentially problematic for new graduates.

Supervision was discussed by each participant. Despite managing significant numbers of staff, none mentioned training in clinical supervision which was described as being like hen's teeth. As above, two quite explicitly stated that they modelled clinical supervision within their departments on the practice education of students. They appeared to encourage a fairly flexible

approach to the supervision of new graduates in their supervisors, from daily informal supervision and formal supervision which could be as often as required dependent on the band 6 or 7 providing the supervision or the needs of the band 5. This flexibility was evident in phase 2 of the study where supervisors outlined very different approaches to supervision. Unfortunately the line managers of 67 Lara and 63 Betty did not volunteer to participate in the study as they were the most obvious outliers in the supervisors in phase 2 of the study in the way that their supervision practices were arranged.

Formal supervision was viewed as an opportunity to access and exchange clinical reasoning with a supervisor or with peers. The managers supported a model of formal supervision based on reflection on action and case based reasoning. It was an expectation that new graduates could access the reasoning of all team members including assistants although in some instances this proved difficult for band 6s to manage where a band 5 was particularly anxious or overwhelmed. In that instance managers stated that they would intervene to offer additional support either to the band 6 or the band 5 or both as explained by 75 Lisa below:

75 Lisa

Clinical supervision is roughly every two months with my band 7's, band 7's should be supervising their band 6's every month and that should be the same for the band 5's, that should be every month by the band 6 staff. When we have people who have difficulties, we might then supervise them every week just to make sure they're keeping on top with it. Actually I have direct supervision with a band 5 at the moment.

In addition to the above the managers discussed aspects of their work with band 5 therapists like modelling, skill development and facilitating confidence, competence and communication as well as conflicts within the MDT but largely these reflected the findings in phases one and two of the study which have already been reported.

4.7.5: Support for Capability Versus Shock of Practice.

Figure 15: Abstracted themes contributing to the super-ordinate theme; support for capability versus shock of practice.
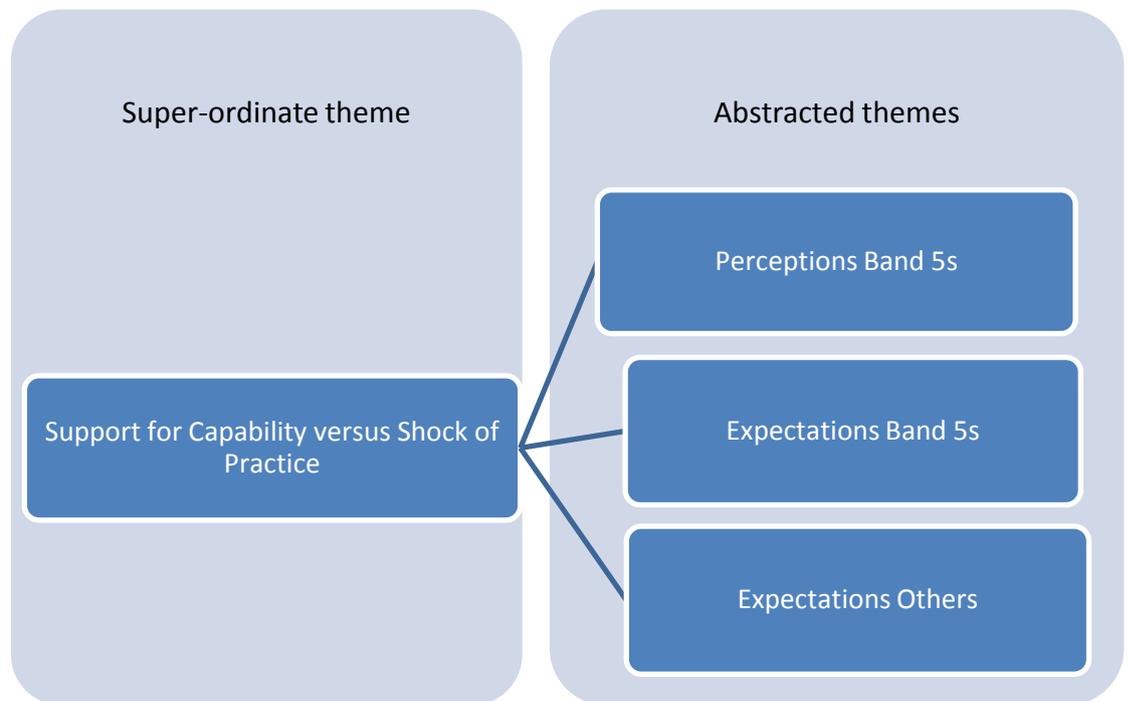
Reflecting one of the themes in phase 2 of the study, this super-ordinate theme was called Support for Capability versus Shock of Practice. As in section 4.7.4 above, as analysis progressed it became evident that data saturation was being reached for this particular sample. This super-ordinate theme therefore duplicated understandings and perceptions not dissimilar to those gained from the analysis of the data generated from phase 1 and phase 2 of the study. The managers view on critical thinking and reasoning were summed up in this long account from 73 Grace

73 Grace

Do you know something, this is something which I have discussed with the other staff as well because the junior staff who we have had, the biggest issues or the most difficulty, or the most challenge is with (.) are the ones who appear not to have these skills, the sort of, just any kind of analysis, critical analysis of what they are doing. They are quite happy if they can do things by

like rote, but actually when it comes down to what I would call thinking on your feet, and problem solving they are the staff who find it really difficult and really challenging and actually I think I have found it really challenging to know how to help those staff members to develop these skills. Now, I would say, I could just do these things, but obviously I didn't arrive as an OT knowing how to do these things so I must have learned them somewhere so I am assuming that I learnt it through my training to be an OT and through life itself, so you are always going to get people whose sort of critical self-reflection or their actions and their reasoning, they are always going to be more developed than other peoples because again we are all different and you know…but in saying that I would say that the staff members who have struggled are the ones who do not have highly developed analysis and critical thinking skills.

The paragraph above contains a number of themes that were common to the accounts of a number of the managers. These were that:

1. The challenge for managers and supervisors is not in engendering skills and knowledge i.e. competence, in new graduates; these can be learnt. The challenge is in facilitating capability, the ability to adapt, change, develop, analyse, reflect, think and reason critically.

2. Band 5s who are struggling to cope and to develop withdraw into procedure.

3. The expectation is that band 5s should be able to think and reason flexibly using multiple modes of reasoning.

4. Life skills, disposition and education contribute to effective thinking and reasoning.

Two of the managers, as part of their staff training, arranged events that permitted their entire staff teams to work on their thinking and reasoning. These gave band 5 therapists the opportunity to access the reasoning of others as well as testing out their own thinking and reasoning in a safe environment.

71 Emily

I was talking about the peer groups that we run; um…so we can bring either a problem case that we want to get some…additional support with or we might read an article and critique it. Um…we've sometimes…we had an issue where we had for example a falling patient and we

needed to get the updated um…sort of route as to what happens if a patient has fallen and who should be called, and what the actions would be so we took that process through. So we do use that as a reflective um…critical thinking time I'm guessing and we just decide as a collective group what it is that we want to do its not directed by anyone person it's a team thing you know as to what we want.

73 Amy

Another interesting thought just in terms of how we kind of treat Band 5's, … I think very much all of our staff meetings are inclusive and that everybody's views count, there's not divisions and experts and … it's come up quite a few times over the years in terms of clinical reasoning … how people who've been in the job for however long and are experts jump to a conclusion and we've spent a bit of time over various different things actually breaking that down for people and kind of light bulb moments for some people, 'oh right yeah I do that anyway'… I think for Band 5's that, you know, is really, really valuable, that they can see that actually everybody has had to go through those steps and, you know, come to whatever conclusion but you can actually track it back and see it for yourself.

The opportunity to access and develop intuitive reasoning was valued. In addition to the above,

71 Emily's ideas about putting time aside to develop reflective thinking skills are supported by

the Royal Society for the Arts' recent work with police officers (Rowson and Lindley 2012)

71 Emily

I think it's having time to um…how can I put it accepting that you have to put time aside to do the reflection. That you know…I think as you become more skilled as a therapist you almost do it without thinking you know because it's so ingrained in you. Um…but I think that they do need to allow time um…and that without doing…without giving it the time and doing it effectively um…they won't progress

There was an aspect of thinking and reasoning that had been discussed by two band 5 therapists

which was clarified following analysis of the managers' interviews. The emphasis on model based

reasoning in the post-graduate curriculum was fairly strongly disparaged by the two students

who completed MSc programmes. They questioned whether this form of reasoning prepared

them for practice. It became apparent when discussing this form of reasoning with the managers

that in some units model based reasoning was integral to practice whereas in other services

reliance on model based reasoning would reduce as exposure to practice and thereby case based

reasoning developed.

The managers confirmed the perceptions of the supervisors in phase 2 of the study that new

graduate therapists may have unrealistic expectations regarding the politico-financial constraints

that frequently impact on therapists in practice. They strongly supported the concept of learning through doing, identified in earlier phases of the study.

While the interviews with managers were perhaps dominated by the challenges of band 5 transitioning and the problems posed by band 5 therapists who were struggling with the process, the managers were clearly committed to providing an environment where transitioning was as straightforward as possible. Two of the managers explicitly stated that managing and supervising new staff was one of the most rewarding and enjoyable aspects of their jobs.

4.8: Summary.

In this section of the chapter abstract and super-ordinate themes highlighted from the analysis of the data across all three phases of the study will be compared and contrasted. The relationships between the superordinate themes identified in the three phases of the study are illustrated in Figure 16 below. There were a few emergent themes that could be identified from the analysis of the transcripts of participants across phases rather than within phases and these will be discussed. Also identified across themes there were what the author has elected to call memes, elements perhaps of something analogous to a professional folk knowledge, passed between therapists but of questionable accuracy. As with the other sections in this chapter the findings summarised in this section will be discussed within the context of the existing literature in Chapter 5 below.

4.8.1: Support and Supervision

In each of the phases there was evidence of well motivated staff adopting supportive supervision practices and some common features in the way supervision was structured and conducted. The main source of support for Band 5s was their clinical supervisor and there was an expectation from participants that Band 5s would model their practice, thinking and reasoning on their supervisor. In general a model of formal supervision based on reflection on action and case based reasoning was supported and supervision was viewed primarily as an opportunity for mutual exchange of clinical reasoning. There was evidence of very sophisticated supervision in a number of the accounts from clinical supervisors. It was obvious that they had moved beyond mechanistic, superficial or *"banal"* (Boud 2010 p.26) forms of reflection in their supervision. Their practices perhaps addressed the concerns of Boud (2010) in that they collaborated with the band 5s in reflective developmental learning, often centred on practice problems generated from

case material. It was also interesting to hear of two units where this was being undertaken on a transdisciplinary basis as supported by Boud (2010). Formal training in supervision was uncommon and supervisors and managers reported that skills in supervision developed through modelling on their own experiences of supervision, through experience and modelling on student practice education. New graduate Band 5 therapists appreciated frequent formal and informal supervision, an approach which was encouraged by supervisors and managers. Informal supervision could be as frequent as daily and there was an expectation that all members of the occupational therapy staff would be accessible to band 5s. In some instances there was a conflict between expectations and experiences in terms of integration into and support from the MDT and the challenge of MDT working was acknowledged by managers and supervisors. The outcome of effective supervision was viewed as being development of confident autonomous practice.

4.8.2. Adaptation.

Effective transitioning was viewed as an outcome of successful adaptation. Pre-existing life skills, disposition, temperament, flexibility, university experience, including practice education, combined with adaptive behaviours, communication, thinking and reasoning skills impacted on Band 5s adaptation in transitioning. Successful behaviours, disposition, thinking and reasoning skills were identified from analysis of the band 5 interviews and from the perceptions of the supervisors and managers. Participants in all phases placed the highest value on communication and confidence in communication. Early active engagement in induction activities including Preceptorship and active engagement in clinical supervision appeared to predict successful adaptation. All participants appeared to support the concept of learning through doing.

It was a self-expectation and an expectation of managers and supervisors that Band 5 therapists would quickly pick up caseloads that would expose them to the full complexity of practice and that, in order to address the needs of that caseload, the Band 5s would engage in forms of thinking and reasoning beyond that which the literature suggests is traditionally undertaken by novice practitioners. Adoption of predominantly procedural reasoning or model based reasoning was insufficient in most practice settings. Reservations were raised by participants in all phases about the preparation of new graduate therapists to undertake pragmatic reasoning. Informal and formal clinical supervision was the primary method endorsed by managers and employed by supervisors to facilitate thinking, reasoning and capability in Band 5 therapists along with learning through doing, modelling or shadowing.

Problematic adaptation was associated with what the Band 5 therapists identified as conflict within the MDT, particularly in relation to communication and discharge planning. It was difficult to determine to what extent low confidence particularly in communication, role uncertainty, anxiety, self-doubt and unrealistic expectations on the part of the Band 5 therapists contributed to these conflicts. Both managers and supervisors acknowledged that discharge planning and MDT conflict were potentially problematic for new graduates. Managers identified that where Band 5 therapists failed to adapt, to make the transition into practice, it was usually their thinking, reasoning and capability that was problematic rather than their skills and knowledge. The Band 5 therapists were surprisingly mobile in terms of their employment and problematic transitioning could be a factor in seeking a new post.

4.8.3. Transitioning.

The supervisors and managers fully recognised the importance and the potential effect of transitioning on Band 5 therapists' future careers. Supervisors and managers were well aware of

the complex, challenging and anxiety provoking nature of transitioning and there was evidence that their own practices were significantly influenced by their own transitioning experiences. Understandably perhaps, in their interviews, the managers tended to focus on new graduates who had struggled to transition. New graduates most difficult for the managers to transition were those who lacked what they described as a suitable disposition. This may have linked to capability as the challenges they described were in facilitating the ability to adapt, change, develop, analyse, reflect, think and reason critically. Critical thinking and clinical reasoning skills were particularly valued. Managers and supervisors were readily able to identify the resources available to new graduates to aid with transition. Band 5s who appeared to be making successful transitions were those who had engaged with the resources available to them. Band 5s who were struggling appeared vague about supervision, Preceptorship eKSF etc. and passive in engaging with them. Band 5s who were struggling appeared to adopt procedural reasoning as their predominant style of reasoning and withdrew into what their managers and supervisors described as the dependent "student role".

Participants in each phase of the study identified heightened levels of anxiety and exhaustion at the time of their initial transition into practice. This appeared to be associated with a disposition of complete ownership and responsibility for patients combined with limited understanding of service constraints and reported low self-confidence in skills, knowledge and capability. It was suggested that this exhaustion might be associated with complete reliance on effortful system 2 thinking and ego depletion. It was proposed that integration into routines would mitigate these effects as the Band 5s were able to switch to system 1 intuitive thinking. Past student placement experience had the potential to improve confidence and speed of acclimatising to routines in Band 5s. New graduates entering the workforce were perceived as being skilled in reflection and in information searching. although the reflection referred to was generally reflection on action.

Figure 16: Diagrammatic representation of the relationships between super-ordinate themes from phases 1, 2 and 3.

		Adaptive Condition	Continuum	Maladaptive Condition
Phase 3 (Managers)	Preparation into Practice	Capability	⟷	Shock of Practice
		Competence	⟷	Anxiety
Phase 2 (Supervisors)		Capability (Engages with complexity)	⟷	Shock of Practice (Withdrawal into procedure)
		Competence	⟷	(Managing) Anxiety
		Autonomy	⟷	Risk
Phase 1 (Band 5s)		Support	⟷	Isolation
		Competence and Capability	⟷	Anxiety
		Adaptive Behaviour in Transitioning	⟷	Maladaptive Behaviour in Transitioning
		Adaptive Thinking and Reasoning in Transitioning	⟷	Maladaptive Thinking and Reasoning in Transitioning

4.8.4. Memes.

Within the analysis of the data generated from the three phases of the study it was possible to identify ideas or truisms that were being transmitted between therapists from senior or more experienced therapists to less experienced therapists. In Chapter 2 the author introduced the concept of memes (Dawkins 1989, Blackmore 1999). Meme is defined by the Oxford English Dictionary as an element of culture that may be considered to be passed on by non-genetic means, especially imitation, for example particular words, beliefs, theories, rituals, practices or behaviours. On analysis of the data there appeared to be ideas, beliefs and behaviours emerging that were part of what could be conceptualised as elements of a culture specific professional folk knowledge or series of memes. In this case the culture would be that of occupational therapists. Within the current study it is not possible to say how widespread these memes are within the profession but it is possible to say that they were present within the accounts of therapists working on different sites within one Health Board, who had trained in a variety of locations and at all grades. Some are considered separately, for example "learning through doing" was a universally expressed meme which was expressed frequently even within individual interviews. The strength of this meme could come from its association with the core beliefs or assumptions of occupational therapy or perhaps from the North American philosophical Pragmatism underpinning key studies of occupational therapy such as that of Mattingly and Fleming (1994) discussed in section 2.1 above.

Examples of memes that were evident across all phases of the study and which related to the overall aim of the study but which did not really arise frequently enough to be considered separately or within each phase analysis might be ideas such as "every occupational therapy job is completely different" which was a meme brought up by participants in all three phases of the study and a source of anxiety for band 5s about to rotate. Another was "In order to pass practice education placements, students should prioritise pleasing their supervisor over their learning"

which was a concern not only in relation to the student placement experience but also when supervisors may be identifying their new graduate therapists with the student role. This finding is reflected in the work of Ryan (2001 p.536) whose participants reported "becoming compliant" and "following the system" during practice education, "just to pass". "Practice in acute medical and care of the elderly units is less complex ("bread and butter occupational therapy") than in specialist units" was another meme. This meme was interesting as it was offered as a rationale for placing new graduates in these units although it is certainly open to question as the pace, pressure and complexity of practice in these units was something that new graduates highlighted as anxiety provoking and both supervisors and managers acknowledged. The final meme that appeared to impact on the new graduates' transition was "good occupational therapists are visible on the unit or ward and busy" although one of the band 5s who had been qualified for two years highlighted this meme as something that she attempted to live up to as a new therapist but now rejected.

The findings outlined in this chapter are examined in the context of existing literature in Chapter 5.

Chapter 5: Discussion

5.1: Introduction

This chapter will discuss the findings of the study and relate these to existing knowledge in order to bring together the arguments that underpin the conclusion and recommendations identified in Chapter 6. The first part of the chapter is structured around the aims of the study. The findings of the three phases of the study are blended and considered in relation to the aims. The limitations that emerged during the course of the study and the analysis of the data will be acknowledged and the author's reflexive understandings (Appendix 11) explored. The worth of the study will be examined and a comparison with commended criteria undertaken.

This study was undertaken based on understandings developed from theory, research and practice regarding the complex and changing contexts of health and social care and the challenges that these present to new graduates transitioning into the workforce. Of concern was a recorded phenomenon associated with challenging transitions in new graduate healthcare professionals, which is sometimes known as *"the shock of practice"* (Boshuizen 1996, Morley 2006c, Duchscher 2008). Effective critical thinking and clinical reasoning were thought to be important to new graduates in developing the capability to cope with change and situations of complexity. It was pre-supposed that new graduates' critical thinking and clinical reasoning could potentially be impacted upon by the process of transitioning and that transitioning could potentially have either, or both, positive and negative impacts on thinking and reasoning.

The overall aim of the study was to examine and attempt to understand and conceptualise the critical thinking and clinical reasoning that occupational therapy graduates employed as newly autonomous practitioners, to understand how these developed to meet the expectations of employers and to recognise barriers to development of thinking and reasoning, from the perspectives of the new graduate, clinical specialist and manager. From this aim, objectives were

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developed for each phase of the study. Broadly these looked at the types or forms of thinking and reasoning adopted by the band 5 therapists and how these related to their thinking as undergraduates. The study looked at how thinking and reasoning developed during the period of transitioning, how that development was supported and how it might be impeded in different practice areas.

Taking this aim into account, the first part of this section will therefore re-examine the author's rationale for undertaking the study in the light of the findings and will reflect on the experience of transitioning, i.e. becoming autonomous practitioners, from the perspective of the phase 1 participants. Incorporated in this account are the perceptions and expectations of the supervisors and managers interviewed in phases 2 and 3 of the study. In the second part of the section the thinking and reasoning adopted by the participants during their transition will be identified and discussed. In the third part strategies used by the phase 1 participants themselves and by supervisors and managers to develop thinking and support transition will be discussed along with factors that might impede transitioning, and finally perceptions of the preparation of new graduates will be examined.

5.2: Transitioning

The findings appeared to support the rationale for undertaking the study as outlined in Chapter 1 above. Within a short time of completion of her participation in the study one of the band 5 therapists had left the profession and obtained a position on the shop floor of a retail store (personal communication). Two other band 5 participants, those who had two years of experience, had each worked in four different posts in the preceding two years (Table 11). While two of those eight posts were temporary and one move was made for reasons not related to the post, two moves were quite explicitly made due to the challenges of the work environment and the resultant effect on the therapist (55 Helen p.99). In addition, one phase 2 (63 Betty) and one phase 3 (76 Monica) participant anecdotally identified band 5 therapists who in the past year

had, in the first instance, moved to another post, and in the second instance left a post, destination unknown; due to inability to cope with the challenges of their respective employment. It would seem that band 5 retention issues reported in past studies of new graduate therapists and other healthcare professionals (Rugg 1999a, Rugg 1999b, Morley, Rugg and Drew 2007, Duchscher 2008) may be discernible in the locality of the study. The full-time, phase 1, band 5 participants, unprompted, readily identified with many of the recognised manifestations of "the shock of practice" (for example 52 Faye p.122, 55 Helen p. 118). When reflecting back on their own transitions into practice a significant number of the phase 2 and phase 3 participants; supervisors and managers, could identify similar experiences and clearly recalled the challenges and anxieties provoked in transitioning (for example 76 Monica p.147).

One thing that the author was concerned about after collection of data from the first phase was the self-perception that coping with the challenges of transition might be viewed by supervisors and managers as a "rite of passage" but this perception was not supported by the data. The supervisors and managers were reasonably empathetic and the only account of "trying out" new staff came from two supervisors describing experiences working in an MDT setting (62 Susan and 66 Abby p.133). It could be suggested that the managers and supervisors who volunteered to participate in the study might be particularly disposed to addressing the problems of new staff but in fact the managers and a selection of the supervisors of the units where the band 5s were finding particular challenges were interviewed for the study and appeared to be open and supportive.

In the descriptions of their transitions into practice the band 5 therapists identified feelings that have been described in the literature as being associated with the shock of practice. In section 4.5.4 above, feelings of anxiety, fear, apprehension, worry and stress are all reported. These feelings have been documented in new graduate health professionals experiencing reality shock or the shock of practice, for example, by Kramer (1974), Tryssenaar and Perkins (2001) and

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Duchscher (2008). Of the five basic forms of fear (Albrecht 2007), these feelings seemed to relate to two; separation, i.e. fear of rejection or loss of respect from the group, whether this was the occupational therapy team or the MDT; and ego-death i.e. fear of humiliation, disapproval or shame. In reflecting back on their own transitions into practice, supervisors and managers would identify similar feelings. It may be that the study failed to capture the euphoria and great expectations described by Tryssenaar and Perkins (2001) as the band 5 participants in this study had commenced employment, in contrast to Tryssenaar and Perkins' (2001) study where data collection commenced prior to employment. Duchscher (2008 p.5) captured the fears of new graduate nurses during their transition and described them thus: *"The primary fears for the new graduates during this stage of their transition were: (1) being 'exposed' as clinically incompetent, (2) failing to provide safe care to their patients and inadvertently hurting them and (3) not being able to cope with their designated roles and responsibilities. The dreaded outcome was rejection by their peers as valued and contributing members of the professional community".* While the participants in this study reflected fears 1 and 3 recorded in Duchscher's (2008) study, fear 2 was replaced with a fear of patients being hurt or readmitted due to a failure to manage risk at the time of discharge.

A number of the understandings gained from Kramer's studies of baccalaureate nurses, conducted over two decades in the middle of the last century in the United States, are echoed in this study. Kramer (1974) conducted a relatively large study (n=79), when considered in the context of studies examining this topic and, although some of her methodology and methods could be viewed as being very much of their time, for example the pseudoscientific incorporation of a control group in a predominantly qualitative study, her findings have to a large extent stood up to the scrutiny provided by subsequent research. From an educational point of view, Kramer identified a conflict arising from the desire of educators to develop new graduates with the capability to deal with the "relative when", i.e. the capability to deal with change over an extended career, versus the practice led needs of the "positive now" i.e. graduates with the

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competence to deal with the immediate challenges of practice at the time of graduation (Kramer 1974 p.vii). Kramer (1974 p.4) drew on existing sociological theories to identify a number of characteristic manifestations of what she termed "reality shock" in her participants. Of relevance to this study, these included: daily contact with conflicting values; withdrawal into procedure, what Kramer identified as "the superefficient bureaucratic technician" (Kramer 1974 p.6); self-perceived lack of competence; questioning the value of their undergraduate education, i.e. education failed to prepare them for practice; protective isolationism, which in this study might have in part underpinned the phase 1 participant's absolute reliance on the occupational therapy team and finally excessive fatigue and exhaustion.

Descriptions of feeling mentally overwhelmed or physically and psychologically exhausted were universal when the band 5 therapists discussed transitioning. There are two potential mechanisms that may underpin this finding. The first is that the thinking that the band 5 therapists are undertaking is predominantly system 2 thinking i.e. their practice at this stage requires conscious thought, little of their thinking is intuitive. Both Evans (2010) and Kahneman (2011) emphasise that system 2 thinking requires high effort and self-control, is slow and has a low capacity (Table 4). Kahneman (2011 p.32) goes further, reporting on experimental data that indicates physiological responses correlating directly to mental effort and distinct from emotional arousal. Recruitment of brain regions, as demonstrated by fMRI, reduces with increasing skill for any specific task. Becoming skilled in a task reduces its demand for energy. Kahneman's (2011) experimental reports highlight that maintaining several ideas simultaneously, whether these need to be combined or require separate actions, as being particularly effortful. Time pressure increases the effort required to maintain system 2 thinking. Kahneman (2011 p.38) suggests that a normal response to mental overload is to divide tasks into multiple easy steps, *"the law of least effort".* The second potential mechanism comes from one of the findings in the work of Boshuizen (1996). Boshuizen compared the clinical reasoning of medical students at various stages of training with skilled clinicians. Boshuizen (1996) reported on experimental findings that

final year students, about to go into practice, when faced with problems generated from practice, recruited a greater number of clinical concepts than either less experienced students or skilled clinicians. That is, the number of concepts plotted against expertise level showed an inverted U distribution. Taking these two mechanisms together it is perhaps understandable that a new graduate juggling the multiple frames of reference (Barnett 2000) or clinical concepts (Boshuizen 1996) required in situations of supercomplexity, time pressured, emotional and consciously, effortfully thinking their way through practice problems might well experience feelings of being overwhelmed and exhausted. There is some disagreement in the literature with regard to Boshuizen's (1996) reports. Unsworth (2001) compared the clinical reasoning of 2 novice and 3 expert occupational therapists. Amongst other findings Unsworth (2001 p.171) suggested that expert therapists *"used more reasoning overall than novices and used a higher percentage of reasoning during discharge planning"* which contrasts with Boshuizen's findings. However, as Unsworth (2001) correctly highlighted, both her methodology and analysis adopted novel methods, unique to the study, and the assertion that expert therapists *"used more"* reasoning cannot really be supported from the results obtained. On examination of these, there would be equal validity in saying that the reasoning adopted by experts differs from novices and that experts are able to communicate their reasoning more effectively by reference to existing theory. As Harries and Harries (2001a) and Schön (1983) identify, experts tend to report their reasoning in terms that reflect a textbook ideal rather than the reasoning they use in practice.

There was evidence from each of the phases of the study that the type of thinking that the new graduates were attempting to undertake was both a self-expectation and an expectation of supervisors and managers. The phase 1 participants talked about constantly reflecting, reflecting after every treatment (51 Ruth) and dwelling on practice issues outside work hours (52 Faye). There was a self-expectation, additionally expressed by some supervisors and managers, that new graduates should be constantly thinking throughout the day and after every interaction (e.g. 54 Jane p.101) and a meme identified that a good occupational therapist is visible on the ward

and busy. Kahneman's (2011) law of least effort might explain why, when experiencing the shock

of practice, new graduates appear to seek practice recipes or focus on forms and checklists i.e.

small step procedural /process type reasoning identified in this study and in that of Mitchell and

Unsworth (2005).

Factors that compounded these issues included uncertainties surrounding role and professional

identity perhaps contributing to conflicts within the band 5 therapist and/or with the MDT.

These uncertainties have been identified both in Kramer's (1974) classical study of reality shock

and Toal-Sullivan's (2006) study of new graduate occupational therapists learning to practice.

Two particular conflicts were identified, the first was a conflict between the new graduates'

perception of themselves as a client centred practitioner and the second about professional

identity or role within a setting where the medical model predominates. These conflicts were

highlighted particularly by the new graduate participants working in acute care (51 Ruth, 56

Mary), in the reflections of those who had moved on from acute care (55 Helen) and in the

reflections of supervisors and managers. Frequently these conflicts surrounded the process of

discharge planning. It is acknowledged that great caution needs to be taken in generalising

results from overseas studies to the experience of therapists employed in the NHS, in this area in

particular. Management of discharge is a very different process in healthcare systems with spare

bed capacity, no waiting lists and extensive private healthcare, than in the NHS. However, there

are some pieces of research that can be used selectively to assist in considering these conflicts.

Client centred practice is a central concept in occupational therapy (Sumsion and Law 2006). The

UK College of Occupational Therapists' Curriculum Guidance for Pre-registration Education

(2009b) identifies the ability to adopt a person-centred approach to assessment of occupational

needs, treatment and evaluation while acknowledging the individual's rights, needs and

preferences as an expected graduate competency and in its Code of Ethics and Professional

Conduct (2010a p.v) explicitly states *"The College of Occupational Therapists is committed to*

client-centred practice and the involvement of the service user as a partner in all stages of the

therapeutic process". Client centred practice in occupational therapy in the UK has attracted

some attention (Sumsion 1999, 2000) though authors (Hammell 2007) have questioned whether

this commitment to client-centred practice is rhetorical rather than practical.

Occupational therapy researchers and theorists, predominantly from the Southern Hemisphere

and Canada, have attempted to investigate and resolve tensions or conflicts between the

aspiration of therapists to be client-centred in their practice and the demands of acute hospital

care. Craig, Robertson and Milligan (2004) and Blaga and Robertson (2008) examined the

practice of occupational therapy in acute general hospitals in New Zealand. They conducted a

mixed methods study which initially surveyed all the occupational therapists working in acute

care in general hospitals in New Zealand where, as in the UK, patients are discharged quickly due

to financial pressures. They demonstrated that about a third of their respondents had less than 1

year of experience as an occupational therapist and half had less than three years. Two-thirds of

their respondents agreed or strongly agreed that their role was to assess and plan for discharge.

These findings reflect those in the current study; relatively inexperienced therapists in rotational

posts in acute care, predominantly working on assessment and discharge planning. What these

studies demonstrated was uncertainty in articulating the concepts that underpin restrictive but

well defined roles. As in the current study there was a demonstrable conflict in Blaga and

Robertson's (2008 p.17) subjects between an approach defined by the pathology of the patient

and another *"being concerned to identify any factors that are specific to the individual"*.

The findings of the two New Zealand studies concur with those of an earlier Australian study

(Griffin and McConnell 2001) which identified constrictions on the occupational therapists' role

imposed by the predominant medical model of health in acute care settings and conceptual and

role confusion. Griffin and McConnell's (2001) work supported the understanding developed in

this study that there was some conflict between the theoretical ideals espoused by therapists

and the realities of working in acute care. In the UK, Robertson and Finlay (2007) looked at the

work of 9 occupational therapists in an NHS acute hospital using a phenomenological approach. They highlighted the tensions and contradictions experienced by their participants in attempting to operate both in holistic (client centred) and reductionist (medical model) modes concurrently. In examining this problem, Wilding and Whiteford (2007) have proposed that participatory action research is a vehicle that may potentially be used to assist therapists in acute care settings to articulate their role and maintain the occupational focus of their practice.

The two band 5 participants, who had graduated from non-traditional programmes, in these cases problem-based, accelerated MSc programmes, appeared in some ways to attribute their problems in transitioning to deficiencies in their education. This finding is echoed in the work of Ryan (2003 p.15) who identified that graduates from accelerated programmes self-perceived an element of "pot luck" in the development of their clinical skills. This self-perception was not reflected in the perceptions of managers or supervisors and the doubts and anxieties expressed by these two therapists were remarkably similar to those expressed by their peers who had undertaken more traditional routes into the profession. It may be that these doubts expressed by these participants about their education programmes mirror Kramer's (1974 p.6) finding that new graduates going through the shock of practice may feel "betrayed" by their formal professional education.

The area of practice which all inpatient therapists, including supervisors and staff working in non-acute settings identified as having the biggest potential for anxiety provoking conflict was discharge planning. This was the one area where band 5 therapists (e.g. 57 Lyn p.124) and some supervisors described situations where they felt disregarded or had their opinions devalued within the MDT. The researcher was conscious here of the potential risk of developing a negativity bias in analysis of the results, in that relatively few unsatisfactory or distressing situations were described but they were described in great detail.

As in Robertson and Finlay's (2007) study, there many were instances where participants expressed satisfaction in working with others to facilitate the safe discharge of complex patients. However supervisors and managers identified a disposition within their new graduates of wanting to "do it all" for their patients, in Robertson's (2012 p.85) words *"novices go for gold".* As expressed by the supervisors 61 Jean and 62 Susan in section 4.6.5 above, the new graduates had limited appreciation of the constraints on services and their consequent impact on practice. This conflict between the externally defined role of assessor and discharge planner and internalised holistic patient centred ideals was the primary source of the conflicts reported by new graduates within the MDT. Moats (Moats and Doble 2006, Moats 2007) a Canadian occupational therapist examined client centred discharge planning in the experience of ten occupational therapists and determined that *"the processes the therapists described were not always congruent with the client-centred philosophy that the therapists professed to support"* (Moats 2007 p.96). Discharge planning was undoubtedly the most challenging and anxiety provoking aspect of the work of the participants in this study. Balancing patient safety, autonomy and perceived needs with external pressures to discharge when the patient may be frail, have ongoing complex social or health issues or be at risk in some other way was seen to be demanding of the therapist's thinking and reasoning.

While not favoured by all within the profession (Robertson, Linda, 2012 personal communication), Kahneman (2011) reports on studies that have used statistical decision algorithms in comparison with the clinical predictions of experts and demonstrates that, almost universally, prediction formula outperform expert humans. Kahneman (2011) identifies the Apgar score used in neonatal care as an example of a prediction formula but the Waterlow score used in pressure sore prevention is another that therapists might be familiar with. If one thinks about the use of domain-specific protocols (Kuipers and Grice 2009) or judgement analysis prioritisation policies (Harries and Gilhooly 2011) that have been shown to support and develop the reasoning of occupational therapists in considering specific problems of practice, discharge

planning in acute care is an area of practice where a prediction formula based on risk of readmission could potentially be developed to support clinical reasoning and aid MDT communication.

5.3: Complexity

Complexity in this instance is used in its lay sense as opposed to that developed from systems theory. As identified in section 4.5.3 above, during the study it quickly became evident that the band 5 therapists were engaging with complexity. This evidence came from their accounts of complex cases, practice settings and practices. It was a self-expectation and an expectation of supervisors and managers that the band 5 therapists would have patients with complex needs in their caseload. The findings in this study support Sinclair's (2007) and Duchscher's (2008) rejection of the staged, novice to expert continuum described by Benner (1982) and Dreyfus and Dreyfus (1980) and might call into question some of the earlier conceptualisations. Some caution is required here as, although Benner (1982) was quite prescriptive about relating skills acquisition to duration of experience in the lower levels of skills acquisition in nurses, she was very careful not to do so when describing experts, stating quite explicitly *"experience is not the mere passage of time or longevity"* (Benner 1982 p.407), and in her later writing (Benner 2004) this point is expanded. However, there is a misperception in the literature (Rassafiani 2009) (Rogers and Holm 1997 cited in Rassafiani 2009), perhaps based on the demographics of the therapists identified as expert in her paper, that Benner (1982) defined an expert as someone with over 10 years experience but, on careful reading, this is not the case. Sinclair (2007) was discussing clinical reasoning in particular, but as identified in each of the three phases of the study, the band 5 participants could be performing, and be expected to perform, at a level consistent with the theoretical description of a novice or advanced beginner in one area of practice while performing at a level consistent with that of a competent practitioner in another. For example, in terms of

pragmatic reasoning there was an expectation and perception that the new band 5 therapists would perform at a level consistent with the description of novice while simultaneously employing other forms of clinical reasoning at a level consistent with that described as advanced beginner or competent. It may be that labelling new graduates as novices is wrong and the label novice should be reserved for students, certainly this idea would be supported by Creek (2007) and the NHS Employers (2012). Ryan (2003) identified that new graduates in her study were not viewed as independent practitioners as they entered practice and contrasted this with practice overseas. While Ryan (2003) suggested that the old title given to new graduate practitioners, Basic Grade, may have contributed to lowered expectations of autonomy sought by new graduate therapists and granted by others, it would appear that the Agenda for Change initiative whereby new graduates are now referred to as Band 5s has perhaps not fully altered these perceptions. In any case, within the research literature there seem to be very arbitrary definitions of expert and novice with little regard for the intermediary stages on Dreyfus and Dreyfus' (1982) theoretical staged continuum of skill acquisition. The major determinant of expertise in the occupational therapy research literature seems to be length of service, although Rassafiani (2009) and others (Weiss, Shanteau and Harries 2006) have demonstrated no correlation between length of experience and expertise. Based on the results of this study, perhaps a more useful conceptual continuum would incorporate at its lower three levels; 1. student; 2. new graduate; (an individual identifying with the characteristics of the shock of practice) and 3. proficient; (an individual identifying with the characteristics of capability). The label; expert, might be redundant as an individual with expertise in one area may be simply proficient in another but will always retain the strong adaptive skills associated with capability. Alternatively it may be that for the purposes of conducting research into the phenomena, the term expert should be associated with characteristics or criteria other than simply length of experience.

5.4: Thinking and Reasoning

The study examined the critical thinking and clinical reasoning of the participants. The band 5 therapists were asked to reflect on their own reasoning and thinking, the reasoning and thinking of people around them and any barriers to thinking and reasoning. The supervisors were asked about their own thinking and reasoning, their perceptions and expectations of thinking and reasoning in band 5 therapists and any potential barriers. The managers were asked about perceptions and expectations in relation to their own role, that of the supervisors and of the band 5s as well as any barriers. To simulate discussion on thinking and reasoning subjects were presented with word clouds (Appendix 5) which were based on understandings developed from existing work on the subject. Participants were asked to illustrate their answers by drawing on examples from practice. This assisted the researcher in ensuring that understanding of the concept under discussion was common to both researcher and participant, and permitted supplementary enquiries to clarify any ambiguity in responses.

With regard to critical thinking it became apparent that the band 5 participants were engaging in each of Barnett's (1997) forms of criticality on an ongoing basis. The evidence suggested that this was primarily at the first level of criticality i.e. critical skills.

With regard to critical reason i.e. critique of knowledge it was evident that the primary source of knowledge for the newly qualified participants in this study was the supervisor, then other members of the occupational therapy team. Some of the band 5 therapists demonstrated that they would seek out other sources of knowledge and evidence usually via the internet but this knowledge usually had a strong clinical focus or applicability. The supervision experience is explored further below, but the finding that an experienced therapist is the preferred source of knowledge and that a strong relationship with the occupational therapy team aids development of knowledge is supported by other authors (Toal-Sullivan 2006, Robertson and Finlay 2007).

While not the focus of this study, a great deal of the content of the newer graduates thinking and/or reflection focussed on knowledge and skills, whether this was perceived lack of knowledge and skills or development of knowledge and skills, as captured in section 4.5.4. This strong theme of self-perceived lack of competence and developmental need appears to be a common feature in studies of transitioning occupational therapy graduates (Hodgetts et al 2007, Seah, MacKenzie and Campbell 2011). The preferred strategy, in combination with effective supervision, to develop band 5 skills and knowledge appeared to be learning through doing. This was expressed by all participants in every phase of the study. The findings demonstrated that this was both a source of immense satisfaction for the new graduate therapists and a source of anxiety. They appeared to be highly motivated to immerse themselves in practice and reported successful patient interactions with evident pride. However, where they were immersing themselves in time pressured, uncertain, complex situations; where their ability to cope was challenged, where they doubted their own skills and knowledge and their thinking and reasoning was apparently affected was where Kahneman's (2011) law of least effort seemed to come into effect. As explained by a selection of the band 5 therapists and observed by some managers and supervisors, the band 5 therapist would withdraw into procedure. Assessment and treatment became governed by "getting through", completing the checkboxes or focussing on filling forms. Managers and supervisors independently identified that this kind of thinking was inadequate and was a sign of someone who was failing to cope. There was something of a balancing act for managers and supervisors here. They had to balance risk to the patient with a desire to expose the new graduates to autonomous practice. They also had to ensure the development of the new graduate, that they were not withdrawing into procedure but were building their case based reasoning, knowledge and skills. There were a set of behaviours, such as lack of engagement with induction and learning experiences, associated with withdrawal into procedure and self doubt that seemed to indicate someone who was struggling to cope. One of these problematic behaviours was associated with critical reason. The analysis of the interviews of the new

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graduates who were struggling to cope, indicated that they self reported that they didn't make time to go on visits, didn't seek out new information on their own, failed to engage with Preceptorship, failed to engage with departmental learning opportunities and appeared to engage with clinical supervision only superficially i.e. they were withdrawing from the opportunity to critique the knowledge of others and were focussed on "getting through". Sweeney, Webley and Treacher (2001b) identify that superficial engagement in supervision can minimise discomfort for both supervisor and supervisee in situations where difficulties are apparent. The reason put forward for these behaviours was invariably time pressure. Graduates who appeared to have reached some level of proficiency demonstrated the opposite picture in that they were engaged and self motivated in their seeking out and critique of knowledge. This disposition was not necessarily associated with length of experience in that one of the most recently graduated therapists was demonstrably one of the most active in developing critical thinking, although she was part-time, very closely supervised, worked with outpatients, was engaged in post-graduate education and probably self-identified least with the shock of practice. This was the band 5 therapist who could be viewed as beginning to work within the first three levels of critical reason in that she was involving herself with collaboratively transforming knowledge and practices within her staff team

With regard to critical action, conceptualised in this study as being synonymous at lower levels with clinical reasoning, the managers and supervisors, in addition to expressing an expectation that the new graduates would work with complex cases in complex contexts, also expected that the new graduates would engage in advanced forms of clinical reasoning. The theoretical existence of advanced forms of clinical reasoning was based on the work of Mattingly and Fleming (1994) who viewed some forms of clinical reasoning as being more associated with expert therapists. What the managers and supervisors identified was that reliance on less advanced forms of reasoning, generally identified as procedural or model based reasoning, meant that the band 5 therapist was less effective or couldn't cope with the complexity of

practice. In addition to procedural reasoning, the band 5s were expected to be able to engage in conditional, interactive, pragmatic, ethical, model based and narrative reasoning (Unsworth 2011b). There was an expectation that case based reasoning would develop with time in practice.

Although this is not universally true, the greatest support for narrative and model based reasoning came from therapists based in psychiatry. In the locality where the study was conducted the Model of Human Occupation (Kielhofner 2007) is embedded as the conceptual model of practice in psychiatry. In contrast the managers and supervisors in acute care, where the Reed and Sanderson (1999) model was being used superficially to structure the in-house assessment, suggested that the use of model based reasoning would reduce as the ability to employ case based reasoning increased. In the phase 1 interviews the band 5 therapists in acute care were on occasion scathing about the applicability of models or, like the acute care occupational therapists in Blaga and Robertson's (2008) study, mentioned models that are not necessarily compatible with acute care (typically the Canadian Model of Occupational Performance). Blaga and Robertson (2008) identified that their participants had internalised these models and used them in reasoning to retain a focus on core professional values in situations where these were threatened. Ryan's (2001, 2003) studies of new graduates identified conflicts or fractures between the emphasis on professional models in their undergraduate education and the limited value placed upon these models, particularly in acute medical settings. "Most" of Ryan's (2003 p.346) participants stated that models were of little use in practice. It could be suggested that a conceptual model of practice designed for use in occupational therapy in acute care would assist therapists in establishing their role and identity by modelling their practice and unique contribution. Politically this might prove challenging for the profession given the conflict between espoused client centred practice and the reality of pressured practice in acute care.

Through analysis of the accounts of practice that the band 5s gave, the researcher was able to identify engagement in multiple forms of reasoning (e.g. 55 Helen p.115). Most band 5s evidenced appropriate use of reasoning that could be seen as analogous with Mattingly and Fleming's (1994) procedural, interactive and conditional reasoning although the distinction between these was sometimes blurred. The therapists who worked in psychiatry and with children valued narrative reasoning as, surprisingly, did one of the therapists in acute care (52 Faye) although on analysis her description of her reasoning appeared to be closer to interactive reasoning. The therapists who identified most closely with the shock of practice explicitly identified that they employed procedural reasoning most frequently, and recognised this as a coping strategy. Therapists identifying with the characteristics of capability appeared to favour interactive reasoning but on analysis conditional reasoning was also apparent in their accounts. These findings, if generalisable, might lead one to question the received wisdom that new graduate therapists, often termed novices, predominantly employ procedural reasoning in their practice or to re-examine the definitions of the term novice. The full-time band 5 participants were expressing ethical dilemmas, particularly in relation to discharge planning throughout interviews and were accessing supervision and the support of peers to support their ethical reasoning (Doherty, Stagnitti and Schoo 2009). While band 5 therapists did not explicitly mention equity and fairness in their accounts, two supervisors highlighted these attributes of ethical reasoning as key expectations.

The one form of reasoning that was contentious was pragmatic reasoning and this was an area where learning from this study might inform undergraduate education. The band 5 therapists, who had attended four different universities, consistently expressed surprise at the influence of political and financial constraints on their practice. The managers and supervisors universally highlighted the lack of pragmatic reasoning in the new graduates. This finding is broadly consistent with the findings from a survey of 94 occupational therapy managers undertaken in Australia by Adamson, Cant and Hummell (2001) who demonstrated that managers desired

planning, organisation and leadership skills in their new graduates. In attempting to provide a *"gold"* (Robertson 2012 p.85) standard of service for their patients, new graduates appeared to have little awareness of practical budgetary constraints on, for example, equipment provision. The new graduates' assumptions in relation to the environment and culture of their practice appeared to be challenged time and again. For example, 52 Faye highlighted withdrawal of social work services from the hospital, working in occupational therapy services undergoing redesign, bed blocking, power dynamics within an MDT and changing her habit of dwelling on work outside work hours as features of her first 8 months that the researcher interpreted as demanding of pragmatic clinical reasoning. Tryssenaar and Perkins (2001 p.22) support both the findings of frustration in the managers and surprise in the new graduates. When talking about their graduates they identify that *"Without exception, politics, organizational battles, paperwork, and the hierarchy of the system startled and often angered the participants".* They go on to highlight *"We thought that the university curriculum educated our students effectively about health care. Yet, perhaps in our enthusiasm to show best practice and highlight the professions we value so much, we had shielded students from some of the more unpleasant aspects of day-to-day practice".* The reservations expressed previously about the researchers in Tryssenaar and Perkins' (2001) study acting as counsellors and mentors for their participants might lead one to question whether they were being used to vent frustrations and the potential for bias in these accounts but Duchscher's (2008) nursing graduates also evidenced strong surprise regarding workplace dynamics in their accounts of transitioning. Duchscher (2008) and Tryssenaar and Perkins (2001) both advocate the development of workplace orientation and transition facilitation programmes for undergraduates transitioning into the workforce. Earlier Kramer and her colleague Benner had advocated the incorporation of what they called anticipatory socialization (Kramer 1974) or reality shock programmes (Benner 1974) in undergraduate education.

The final form of criticality; critical self reflection, was the most frequently identified form of criticality in the accounts of the band 5 therapists and supervisors. It formed the basis of supervision. Band 5s perceived as developing capability were creating portfolios of written reflections to support and evidence their learning. Band 5s who were coping with the shock of practice were aware of the potential of critical reflection to support their thinking and practice and to improve their engagement with supervision. These therapists planned to use reflection but reported that due to time pressures they had not yet done so or had only done so very superficially. One of the cognitive behaviours that was associated with the shock of practice was superficial or limited reflection. It was an expectation of supervisors that band 5 therapists would be able to reflect and that this would be the vehicle to facilitate supervision. It was a perception of both supervisors and managers that recent new graduates were skilled in reflection in comparison with those of past generations. This was not reflected in the new graduates' self-perception. Even those who appeared to be using reflection successfully stated that developing their reflections was something that they had had to work hard on since entering practice. They expressed dissatisfaction with their undergraduate experience in relation to learning to reflect and about reflection. They perceived that their skills in reflection had developed after entering practice, were facilitated by supervision and their development was strongly associated with learning through doing, (e.g. 52 Faye, p.104). Hodgetts et al (2007), from a single occupational therapy programme in Canada, who examined occupational therapy graduates' satisfaction with their education and preparation for practice, found that as their graduates' duration of practice increased they incorporated more theory into their practice. While there are questions about whether duration of experience is related to incorporation of theory into practice, from this study the researcher's perception was that emerging capability was associated with the use of theory, in this instance relating to reflection, to inform practice.

On examination and analysis of the data it appeared that the concepts of reflection and reflective practice were relatively well embedded in the thinking of the participants. Even where, in their

accounts, the band 5 therapists appeared to be struggling to incorporate reflection into their practice and supervision, they were aware of the potential of reflection to improve their thinking and practice. Band 5 therapists demonstrating emerging capability were explicitly using theoretical models, in particular Gibbs (1988) Reflective Cycle, to structure their reflections, primarily in preparation for clinical supervision but also to maintain a personal development portfolio, to meet the demands of Preceptorship and HPC registration. The ability to engage in reflection on action (Schön 1983, 1987) was therefore an expectation of supervisors and supervisees. It was explicitly an expectation of managers that reflection on action would be incorporated into formal supervision. With regard to reflection in action (Schön 1983, 1987), analysis demonstrated that participants professed to be "constantly reflecting" "reflecting every time you see a patient" but that, when probed during interviews, a proportion of these reflections were of variable criticality and in others it could be questioned whether the participants were using "reflection" to describe all forms of thinking and reasoning. However, there was evidence from the band 5 therapists' interviews that reflection in action was informing their practice at some level and that this met an expectation expressed by both supervisors and managers as well as meeting professional standards (COT 2011, HPC 2007).

The final type of thinking that was discussed by participants in interviews was interpreted by the researcher as System 1 thinking (Kahneman 2011). This type of intuitive or automatic thinking has long been recognised in the professional literature, based on the work of Schön (1983, 1987), but the ability of practitioners and researchers to access it has possibly been overstated and the amount of influence it has on day-to-day decision making perhaps understated. The participants talked about themselves or co-workers as being able to do things, problem solve, or come up with answers "automatically", "without thinking about it", "getting from A to B" "getting into the routine" "by gut instinct". On questioning and analysis, this type of thinking was not expected of the new graduates by managers, as the graduates entered the profession, but was expected to develop with exposure to practice; i.e. learning through doing. This approach agrees with that of

Schön, (1983, 1987) although his work was not explicitly acknowledged by participants. The new graduates viewed this type of thinking as something of an indicator or badge of proficiency in others. One of the band 5s who had worked in four different posts (57 Lyn) reflected on the development of "automatic" thinking in her own practice. In her second post (after temporarily working in a local authority in her first) she had a high degree of autonomy and relatively low caseload. She said that the thinking skills she developed in herself during that period made her far more able than her new graduate peers when six months or so later she went to work in a highly pressured acute medical unit. She was much quicker to get into routines, adapt to the pressures and required far less support in decision making. It may be that this picture of emerging capability is associated with the ability to employ both system one and system two thinking (Evans 2010, Kahneman 2011) in contrast with the new graduate, going through the shock of practice, who is reliant predominantly on system two thinking.

5.5: Supporting the development of thinking and reasoning in transitioning

From analysis of the data a number of mechanisms were in place to support the development of thinking and reasoning in band 5 therapists. The interviews with the managers demonstrated a strong commitment to supporting band 5s during their induction and transition into the profession. In some instances this appeared to be predicated by the manager's own experience of transitioning. The managers appeared to primarily view their role as building an environment where band 5 therapists could make the transition to competent practitioner successfully. Secondarily they would intervene where issues arose to alter working patterns, supervisory arrangements or work locations in an effort to facilitate band 5 transitioning. In some instances they would directly supervise a band 5 therapist themselves or co-supervise. The managers evidenced practices and procedures that would largely be supported by current best practice principles (College of Occupational Therapists 2010b). The existence of these practices and

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procedures could be established and confirmed from the accounts of the band 5s and supervisors. Some reservations regarding training of supervisors, perception of new graduates as students and use of adapted practice education materials in supervision were highlighted in section 4.7.2 above. The experience of supervision of band 5 therapists transitioning between rotational posts was also questioned. Strong (2009) highlights that therapists moving from one post to another may require increased supervision initially. Duchscher (2008) reported that in nursing graduates moving post within the early part of their transition extended, intensified or delayed progression. The quote from a participant that Duchscher (2008 p.7) uses to illustrate this point: *"it's like a new job every time you go somewhere new"* was almost exactly the phrase used by participants in this study and was identified as a meme in section 4.8. Strong (2009) advocates training in clinical supervision for both supervisor and supervisee. As in the study by Gaitskell and Morley (2008), few supervisors had training in clinical supervision and clinical supervision was not one of the induction topics for new graduates. Supervisors appeared to develop in three ways, by modelling on their own supervision, by adopting techniques from student practice education and by learning through doing with case based reasoning. While not wishing to denigrate any of these methods as each may be effective; the first relies on competent role models; it could be questioned whether professional supervision should be modelled on student supervision and; is learning by trial and error going to give supervisees a consistently good experience? Current best practice guidelines (COT 2010b) suggest that supervisors should be trained. Sweeney, Webley and Treacher (2001c) who examined supervision in occupational therapy add that both supervisor and supervisee should be trained in supervision for supervision to be effective. From a nursing background, Bond and Holland (2010) describe supervisor training as necessary for consistent effective supervision and go on to describe supervision training models such as groups, pairs and triads. As Strong (2009) and Gaitskell and Morley (2008) have identified, although there is limited research evidence, professional supervision is strongly supported by legal and professional requirements and by practitioners. Consistently, in

the literature on transitioning, (for example Sweeney, Webley and Treacher 2001b), new graduates identified effective supervision as aiding the process although studies such as Sweeney, Webley and Treacher (2001b) have questioned the effectiveness of supervision in some instances.

On analysis, supervisors appeared to adopt individual practices in supervision, five of the six had line management as well as clinical supervision responsibilities for their band 5s. Sweeney, Webley and Treacher (2001b) suggest that this relationship can impede open communication between supervisor and supervisee. Within formal supervision a number of components could be identified whatever the style of supervision adopted by the supervisor. These were facilitated critical self-reflection and supervisor feedback, mutual exchange of access to clinical reasoning based on case material, support for pragmatic reasoning and team integration / socialisation. These components can be related to the Proctor (1986, cited in Bond and Holland 2010 and Cassedy 2010) integrated model of clinical supervision, widely used in the nursing profession, which proposes a form of supervision based on formative, normative and restorative functions. Both Sweeney, Webley and Treacher (2001a, 2001b, 2001c) in occupational therapy and Bond and Holland (2010) in nursing reveal another potential side of clinical supervision whereby both supervisors and supervisees are resistant to the process. It may be a limitation of this study or unique to the participants who volunteered but this was not a something that featured in the findings. The other factor is the finding that, however subconsciously, each of the supervisors referred to new graduates as "students", the paperwork was based on practice education paperwork and it may be that clinical supervision of new graduates just became an extension of practice education, with both supervisor and new graduate in familiar roles. This perception was supported by the accounts of certain participants in each phase of the study, band 5s who were closely supervised, supervisors who appeared to err very much on the side of caution when balancing risk and the facilitation of band 5 autonomy, and managers who identified deficiencies in their band 5s' professional education which required remediation on employment. Other

band 5 participants reported the major difference from student practice education was in the amount of autonomy they were granted and responsibility they were given. Perhaps of relevance here were the significant age differences between supervisors and supervisees in this study whereas Sweeney, Webley and Treacher (2001a, 2001b, 2001c) highlighted insignificant age differences as one of the barriers to effective supervision in their study. Pre-existing relationships with the researcher may have influenced responses here as a few of the participants' previous contacts with the researcher would have been during practice education visits. Whatever the reason, the band 5 therapists derived the bulk of their support from their supervisors and this appeared to be the most significant relationship in facilitating successful transitioning. The supervisor was the primary source of knowledge and feedback on performance. The positive descriptions used to portray supervisee-supervisor relationships in this study mirrored those of the participants in Sweeney, Webley and Treacher's (2001b) study.

Complementary to formal supervision, new graduates received considerable informal day-to-day supervision, particularly early in their transitions. In addition to their supervisor this came from the other members of the occupational therapy team for five of the six participants and from the MDT for the sixth. This support appeared to be particularly valued. One of the forms of fear expressed by new graduates in this study and others (Duchscher 2008) was fear of separation, that the new graduate would not be accepted by the team. As in Robertson and Finlay's (2007) study, perceived membership of the team, generally the occupational therapy team, reduced perceived stress levels and boosted self-esteem. In early transition, asking for and receiving support from the team was valued as was feedback on performance from peers.

In addition to induction activities, informal and formal supervision, within the locality a Preceptorship programme (Morley 2012) had been established. Over a period of three years preceptors were trained using a programme and manual developed by Morley in conjunction with the U.K. College of Occupational Therapists (Morley 2006a, Morley 2012). Whilst relatively

new to occupational therapy, Preceptorship has been embedded within professional nursing practice for almost 20 years and has been defined as "A period of structured transition for the newly registered practitioner during which he or she will be supported by a preceptor, to develop their confidence as an autonomous professional, refine skills, values and behaviours and to continue on their journey of life-long learning" (The Department of Health 2010 p.11). Morley (2012 p.5), supported by the U.K. College of Occupational Therapists, built on the Department of Health (2010) definition above, in offering a definition for Preceptorship in occupational therapy practice, stating that "Preceptorship is a structured development process, including observed practice and feedback against agreed standards, to support newly qualified practitioners to build their professional identity and competence in order to facilitate their successful adaptation into the workplace".

Two of the band 5 therapists were engaged in Preceptorship, two were yet to commence, one had arrived with more than one year of experience and was not included in the programme and one had begun Preceptorship but abandoned it on transferring to a new post. The preceptors of the band 5 therapists were not their clinical supervisors or line managers and followed the band 5 for the whole of their first year, as opposed to supervisors who changed with each rotation. A number of the supervisors and managers were involved with Preceptorship or managed preceptors. The researcher's historic involvement with Preceptorship may have informed the supervisors' and managers' responses to questions about Preceptorship but the band 5 therapists would have been unaware of this involvement. The supervisors who had acted as preceptors were broadly positive without being very specific about the process. It was viewed as a supplement or addition to clinical supervision. The supervisors who had trained as preceptors but not yet had a preceptee looked forward to the experience. The two band 5s yet to engage with Preceptorship gave time pressures as their reason. The two band 5s who were engaged with Preceptorship particularly valued the additional feedback on their performance from an external source and evidenced work that they had undertaken in preparation for their

Preceptorship appointments as developing their skills in reflection, maintaining academic writing skills and encouraging engagement with evidence based practice. It appeared that they viewed Preceptorship appointments almost as academic assessments, more formal even than formal supervision. Both identified these appointments as a spur to encourage critical thinking and to articulate clinical reasoning. Although moves had been made to establish Preceptorship it was apparent that the initiative had been delayed and inhibited due to the embargo on recruitment of band 5 therapists at the time of the study. While it is recognised that the initiative was in its infancy, it may have been that, on review and evaluation, the way that Preceptorship was being employed had the potential to change in its nature. It is not clear that the best use of Preceptors is as gatekeepers for Agenda for Change gateways, which appeared to be the perception of the role in the eyes of the two band 5 therapists / preceptees interviewed. One of the units in the Health Board had instituted a dual supervisor system of clinical supervision, one supervisor taking responsibility for clinical supervision and the other for the supervisee's professional development. There would be scope within this model for a potentially more productive form of Preceptorship.   While once again emphasising that only two participants had begun Preceptorship and acknowledging that their experience may not be typical, it could be suggested that facilitating professional acclimatisation and development of thinking and reasoning would appear to be closer to the form of Preceptorship adopted by the nursing profession, which has considerably longer experience of establishing Preceptorship than occupational therapy. Unfortunately only one participant from the dual supervision unit (63 Betty) volunteered to participate in the study but she was wholly enthusiastic about that form of supervision.

5.6: Limitations and strengths of the study:

5.6.1: Interpretative Phenomenological Analysis (IPA) methodology.

A number of occupational therapy authors (Clarke 2009, Cronin-Davis, Butler and Mayers 2009) have commended interpretative phenomenological analysis (IPA) as a research methodology for occupational therapy researchers. The methodology is increasingly employed in occupational therapy research studies (for example Hawtin and Sullivan 2011, Tzanidaki and Reynolds 2011). Finlay (2011) and Smith, Flowers and Larkin (2009) highlight the double hermeneutic nature of IPA which concurrently integrates the participant's perceptions of his or her subjective experiences, emotions and reasoning and with the researcher's interpretation of that world. The success of the approach is dependent on the ability of the participant to communicate their experiences, thoughts and feelings (see comments regarding participant 53 below) and the reflective and analytical abilities of the researcher (Cronin-Davis, Butler and Mayers 2009). The focus of the approach on the views and perceptions of the individual in making sense of their situation (Finlay 2011) appeared to support the choice of this methodology. The researcher was concerned about how feasible it would be to bracket off pre-existing knowledge and understanding during the research process. However, the advantage to this researcher of using IPA was that it acknowledges that the researcher is implicit within the research process and requires the researcher to use pre-existing theory and assumptions (Cronin-Davis, Butler and Mayers 2009) to aid analysis, interpretation and presentation of the data. Finlay (2011 p.141) highlights that researchers should however import theory *"because the data invites it"* rather than the researcher's inclination.

5.6.2: Evaluation of Quality

Smith, the originator of IPA, (Smith, Flowers and Larkin 2009 p.179) commends the methods of Yardley (2008) in investigating and demonstrating "validity" in qualitative research. Smith and

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colleagues (Smith, Flowers and Larkin 2009) have raised concerns similar to those of Hammersley (2007), identified in chapter 3 above regarding the use of simplistic checklists to evaluate quality in qualitative research and describes Yardley's (2008) approach as *"more sophisticated and pluralistic"* (Smith, Flowers and Larkin 2009 p.179).

Table 14: Procedures for enhancing validity adapted from Yardley (2008)

Yardley's (2008) procedure	Critical thinking and clinical reasoning in new graduate occupational therapists: a phenomenological study.
Triangulation	Data were gathered from three groups, band 5 therapists, supervisors and managers
Comparing Researcher's Coding	The first two transcripts were initially analysed by the researcher and the principal supervisor. Subsequently extensive samples of coding and thematic analysis were exchanged between researcher and principal supervisor with written rationales and summaries. The researcher's development of thinking between cases and groups was consistently reviewed in discussion with the principal supervisor.
Participant Feedback	While not going as far as Yardley's suggestion that participants comment on the analysis, they were given copies of the completed transcripts for confirmation of accuracy, encouraged to comment on these and question the researcher, which 3 of the participants subsequently did. Yardley (2008 p242) goes on to suggests that where the theory and analytical processes are complex, the need for participants to feedback on analysis may be avoided.
Disconfirming Case Analysis	There were disconfirming cases present within the participants in the study and these have been identified in the presentation.
A Paper Trail	There is an extensive paper trail of analysis, of which a tiny sample is presented in section 4.2 above, which would be available to other researchers or auditors if appropriate.

Yardley (2008 p.239) outlines *"procedures for enhancing validity"* and these are mapped to the procedures in the current study in table 14 above. Yardley (2008) goes on to list 16 core principles for evaluating the validity of qualitative research and gives examples of studies that demonstrate validity and lack validity. While it would be difficult if not impossible for a researcher to objectively self rate the quality of a research project, it is possible to identify a small number of Yardley's (2008) criteria that the present study fails to meet and to reflect on the reasons for this.

1. The purposive sampling of band 5 therapists in the study was affected by an embargo on recruitment in the locality of the study. This affected the ability of the researcher to recruit from as diverse a range of specialities as might have been optimal. For example there are no representatives with a speciality in learning disability apart from one manager.

2. The presentation of the study does not employ data observation frequencies. While these were calculated during analysis it was decided that it was important to retain the interpretative phenomenological analysis principle of focus on the individual. This meant that a phenomenon unique to one individual and significant to that individual would not be lost in the process of analysis.

Seven therapists were interviewed for phase one but one was withdrawn from the study by the research team. This therapist (53) had been identified by the gatekeeper as meeting the criteria for the study and had completed the expression of interest and informed consent to participate in the study. Unfortunately once the interview commenced it became clear that, while the therapist had recently qualified to work in the UK, they had extensive experience of working as an occupational therapist overseas. On discussion with the principal supervisor consideration was given to including the data from this interview in the study for two reasons. Firstly, having gathered the data, ethically it would have been desirable to use it. Secondly, participant 53

might be incorporated as an outlier or disconfirming case (Yardley 2008). However, transcription of the interview proved problematic. The participant had English as a second language and the transition experience related in the interview mainly concerned transitioning to work in the UK. There was a concern that the participant's difficulty in communicating their experiences would render analysis invalid. Following detailed discussion with the principal supervisor it was decided to withdraw this subject's data from the study. There has been extensive debate on the IPA bulletin board (Birkbeck 2012) about the limitations and benefits of employment of translation services in this approach but this was not an option open to the researcher.

Further limitations were inherent in the study design and are acknowledged by the researcher. The study was conducted within one Health Board, restricted to one professional group and the representativeness of the participants relied on the diligence of the gatekeeper. While the methodology adopted determined relatively limited numbers of participants it would be of interest to investigate transferability of the findings beyond professional and geographical boundaries. During the course of the study an embargo on the employment of band 5 therapists in the Health Board complicated recruitment to the study. The attempt to use computer software for data analysis proved to be something of a blind alley. While the software aided storage and retrieval of data, after analysing three interviews it became apparent that the depth and detail of analysis and interpretation demanded by the IPA methodology adopted was not going to be achievable using the software. While the time spent obtaining, learning and using the software will be of use in future, it did delay comprehensive data analysis.

The researcher was and is conscious that there was an opportunity to give the study a greater occupational focus through analysis, discussion and presentation of the findings. Interpretative Phenomenological Analysis would potentially have permitted this. Following some internal debate this idea was reluctantly rejected. It was felt that interpretation from an occupational perspective would add an unnecessary layer of complexity to a study that already encompassed

multiple complex and contested constructs. There was a concern that employing this stance would have potentially rendered the study less accessible to others, and while demonstrating ambition may well have compromised achievability and wider applicability.

5.6.3: Articulating the Worth of the Study

As discussed in chapter 2 above Tracy (2010) has presented a model that she suggests may be useful for delineating quality in qualitative research. Tracy suggests that good quality qualitative research will exhibit eight key markers including (i) a worthy topic, (ii) rich rigour, (iii) sincerity, (iv) credibility, (v) resonance, (vi) significant contribution, (vii) ethics, and (viii) meaningful coherence. While acknowledging the reservations of authors such as Hammersley (2007) regarding the use of criteria such as Tracy's, the author's ethical commitment to demonstrating the worth of the study, as discussed in chapter 3 above, may be aided by reference to a number of Tracy's criteria. While a number of Tracy's criteria are examined elsewhere in the thesis, for example, ethics, reflexivity, meaningful coherence i.e. the relationship between the aims, methods and findings, etc.; in this section the worth of the study, as viewed by the author, will be intimated and mapped to selected markers identified by Tracy (2010).

With regard to the worthiness of the topic, the study was particularly timely, given the changes in the profession and practices instituted by Agenda for Change and more locally by the establishment of a Preceptorship programme. The experience of band 5 therapists during transition and the development of their thinking and reasoning have not been examined by other authors since these changes or in the context of NHS Scotland. The facilitation of critical thinking and clinical reasoning remains a significant goal of the transitioning process. Successful adaptation in transitioning and its opposite, maladaptation, associated in this study with a known phenomenon known as the shock of practice, have the potential to impact on effective patient care. The study incorporates novel theoretical constructs, building on relatively recent innovations in cognitive and neuropsychology, which until now have not been fully acknowledged

in the literature on critical thinking and clinical reasoning in the occupational therapy profession and very rarely and only recently in the literature of other health and social care professions. These are integrated with understandings developed from other fields, predominantly pedagogy, to suggest mechanisms of adaptation and maladaptation in transitioning. In combination with a transparent account of the methods employed, Tracy (2010 p.840) suggests that "sufficient, abundant, appropriate and complex theoretical constructs" would demonstrate rich rigour. With regard to Tracy's credibility and sincerity criteria, these parallel a number of Yardley's validity criteria mapped in table 14 above. For example the current study embraced triangulation, permitted participant feedback and has self-reflexivity threaded throughout. What Tracy (2010 p.844) describes as the resonance of the study refers to the transferability and generalisability of the research and the potential to transform the understandings of others. It is hoped that chapter 6 below which comprises the understandings developed during the course of the study, and identifies the potential of the findings to influence practice, policy, future research and professional education will resonate with the reader. The significant contribution of the research lies in its unique integration of new and existing theory, its unique conceptualisation of critical thinking and clinical reasoning in the changing contexts experienced by transitioning health professionals as well as in the methods employed, for example, in the use of word clouds and in incorporating and triangulating the perspectives of three groups of stakeholders. In addition, the study highlighted the limitations in the existing literature and raised questions about existing theory, in particular with regard to skills acquisition, clinical reasoning, clinical supervision and transitioning. With regard to Tracy's (2010) exiting ethics, the author has contributed to the IPA listserve forum, supporting peer researchers and a dissemination strategy incorporating publication, electronic thesis repository and conference presentation is envisaged.

Having highlighted some of the limitations and strengths inherent in the study, it is important to recognise that the conclusions and recommendations listed below should be viewed with the caution that one should apply to any qualitative research study. The theory and insights gained

from this study may prove useful in similar contexts but would require further investigation before being generalised to a wider population. However, bearing in mind the caveat that generalisation of findings from qualitative research should be attempted with caution, one of the ethical commitments that emerged from the reflexive interview and consideration of Tracy's (2010) work in Chapter 3 was that the ethical worth of the study should be demonstrated by articulating the potential impact on patients and clients. Therefore the potential application of the emerging theoretical concepts in practice will be explored as conclusions are drawn and recommendations highlighted in Chapter 6 below.

Chapter 6: Summary, Conclusions and Recommendations.

6.1: Introduction

In this chapter the findings and discussion in the preceding chapters will be distilled and conclusions or understandings that developed will be extracted. From these conclusions or understandings a number of recommendations are highlighted. In making these recommendations, the author acknowledges that the balance between the ethical commitment to articulate the worth of the study and the question of generalising findings from what was a relatively small-scale qualitative study is a difficult one to achieve. As Lewis and Ritchie (2003 p.263) identify, *"there is not a clear set of ground rules for the conditions under which qualitative research findings can be generalised"*. Lewis and Ritchie (2003 p.264) go on to suggest three ways in which generalisation can be conceptualised:

1. Representational generalisation: what is found in the study participants is true of the population from which they are drawn, in this case occupational therapists within a single Health Board. The potential for representational generalisation is dependent on how well the sample of participants map to the larger population.

2. Inferential generalisation: can the findings be generalised to other settings or contexts, in this case, for example, new U.K. occupational therapy graduates. Valid inferential generalisation depends on the congruence between the context of the original research and the context where it may have potential applicability.

3. Theoretical generalisation: do the findings have more general application, in this case, for example, by highlighting questions regarding the theory of skill acquisition. Lewis and Ritchie suggest that detailed study of processes such as transitioning can inform theory and permit critical examination of existing theory.

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Smith, Flowers and Larkin (2009 p.29) suggest that a *"major influence on Interpretative Phenomenological Analysis is idiography"* and that generalisations may be established with caution when detailed analysis from particular single cases is either pooled together for further analysis or where *"an initial tentative hypothesis is tested against each of one's cases in turn"* (Smith, Flowers and Larkin 2009 p.31). The conclusions and recommendations below therefore are made with caution as they draw on particular individual experiences, interpretations and understandings, both on the part of participants and researcher, to make generalisations which incorporate the structure suggested by Lewis and Ritchie (2003).

In pursuing the aim of this study the author was able to confirm that the phenomenon described as "the shock of practice" continues to be existent in the experience of new graduate occupational therapists within the locality of the study and other localities, as reported by therapists who had changed jobs within the preceding two years. This was recognised by the new graduates, their supervisors and managers and was perceived to be a barrier to critical thinking and clinical reasoning. It may be that supervisors and managers find it difficult to reconcile the experience of the new graduates going through the process of transitioning with the NHS Employers grading of competent therapist and as a consequence subconsciously view the new graduates as students. The thinking and reasoning expected of the new occupational therapy graduates was different in character from that described in the existing literature. Questions were raised about a number of understandings which pervade the existing literature on the thinking and reasoning of new occupational therapy graduates. Thinking and reasoning appeared to develop in the new graduates through a number of mechanisms, chiefly through exposure to practice; learning through doing, supported by formal and informal supervision; peer support and Preceptorship. The most important relationship for the new graduates was that with their supervisor and, while a minor question was raised about training in clinical supervision for both supervisors and supervisees, the phase 2 and phase 3 participants in the study

evidenced strong personal and professional commitments to the new graduate occupational therapists in their workforce.

6.2: Recommendations.

6.2.1: Representational generalisations.

1. The area of thinking and reasoning where new graduates self-reported that they felt particularly ill-prepared was in pragmatic reasoning i.e. consideration of politico-financial and resource constraints. This finding, triangulated with the perceptions of supervisors and managers, is supported by existing literature and would be worthy of consideration during future curriculum development. Literature suggests that this problem can be ameliorated by incorporating work readiness programmes into the undergraduate curriculum.

2. Central to fear and anxiety in Band 5 therapists was discharge planning. The fear and anxiety in this instance was not without basis. Where conflict was reported within MDTs this tended to centre on discharge planning and complex cases. Kahneman (2011) makes a strong case for using algorithms to support decision making in instances such as these. Examples of algorithms in healthcare are the Waterlow score in pressure management and the Apgar score in obstetrics. Consideration should be given to the development of a complex-discharge algorithm based on risk of readmission. The potential impact on patient care would be in communicating risk effectively and reducing unsuccessful discharges.

3. Support for band 5s was sourced primarily from within the occupational therapy team and the relationship with the clinical supervisor was particularly critical to professional development. Band 5 expert-based reasoning drew almost exclusively on other

occupational therapists in the early days of practice. Development of skills in clinical supervision was rarely facilitated by formal training. Therapists generally developed clinical supervision skills through modelling on their own experience of supervision, learning through doing and training in student supervision. Explicitly, phase 2 participants adopted a practice of providing close supervision for new graduates, gradually withdrawing support as the new graduates developed autonomy. The expectations on band 5 occupational therapists were different from the expectations placed on band 5s in other professions within the MDT. Best practice guidelines suggest that both supervisor and supervisee should have training in clinical supervision and this approach is supported by the findings of this study.

6.2.2: Inferential generalisations:

a. New graduates reported exhaustion. It was suggested that this was associated with the system 2 effortful thinking being demanded of them. As thinking and routines become internalised, less effortful, system 1 thinking is employed. It is known that thinking and decision making improves with space to reflect. The facilitation of micro-reflections should be considered as a supervision strategy in supporting the development of critical thinking and clinical reasoning in band 5 therapists during the process of their transition. This strategy has been used successfully in pilot studies with police officers (Rowson and Lindley 2012).

b. New graduate occupational therapists reported that they experienced fear, anxiety and conflict on entry to the workforce. In selected participants this characteristic picture of anxiety, combined with low self-confidence in their role, self perceived poor competence and capability, limited inter-professional socialisation, withdrawal into procedure and a passive disposition to development of thinking and reasoning, was thought to be

indicative of the phenomenon called the shock of practice. Experienced therapists, reflecting on their own transition into practice, identified strongly with these feelings. Some adaptive strategies impacting positively on the shock of practice were identified (engagement with supervision, induction, Preceptorship etc), some strategies were found to be mal-adaptive (passivity, withdrawal into procedure etc). Internal conflicts centred on expectations developed in undergraduate education that were not realised in practice, for example client centred practice. From the literature (Sweeney, Webley and Treacher 2001b) it is apparent that new graduates are disposed to the establishment of a facade of proficiency but the characteristics described above might act as a red flag for supervisors and managers in early identification of staff who are struggling to cope with transitioning.

c. Managers and supervisors valued and enjoyed what new graduates brought to their departments. They were empathetic to the challenges of transitioning and had a demonstrable commitment to facilitating a smooth transition between new graduate and competent practitioner while ensuring effective service delivery. They were supportive of initiatives such as Preceptorship. Occupational therapy is not the only profession to face the problems associated with the shock of practice in new practitioners. Teaching, (General Teaching Council Scotland 2012) for example, has introduced a probationary year for all new staff whereby they spend one day a week on continuous professional development, have weekly meetings with an external mentor and monthly educational programme days. While implementation of such a programme would undoubtedly be challenging for the health professions, the proposed move of 70% of Scottish NHS AHPs into the community by 2015 might permit this kind of fairly radical change, mitigating against any potential for professional isolation, (Morley, Rugg and Drew 2007), improving the experience of new graduates, the retention of band 5 therapists and ultimately the quality of care for patients.

6.2.3: Theoretical generalisations:

a. The findings led the author to question existing theory on professional development. In particular, existing conceptualisations of the terms novice and expert appear to be outdated and no longer relate to practice or standards. Review and revision of the theory of skills acquisition associated with authors Dreyfus and Dreyfus (1980) and Benner (1984) may be urgently required. The continuum model of skill development is not supported by this study. In particular, duration of service should no longer be considered as a criterion for judging expertise. A new, non-linear conceptualisation of progression from student to new graduate and proficient therapist is suggested, based on characteristics associated with achievement of capability.

b. Band 5 therapists work in situations of complexity. This is both a fact and an expectation. Creek's (2003, 2009) and Duncan, Paley and Eva's (2007) assertions regarding complexity in occupational therapy practice, although they in some ways conflict, are both partially supported by the findings of this study. It was proposed that Barnett's (2000) pedagogical concept of super-complexity, whereby practitioners juggle multiple frames of reference, some of which may require consideration of complexity, was worthy of further exploration.

c. The findings of this study suggest that band 5 therapists have a self expectation and are expected to engage in what would traditionally be viewed as advanced modes (Mattingly and Fleming 1994) of clinical reasoning. Questions were raised about the generalisability of Mattingly and Fleming's (1994) findings out with the context of their study. The clinical reasoning of new graduates is an area worthy of future study but it is important that an accurate description of new graduate rather than novice is incorporated in future research as per point a. above. The arbitrary classification of novice, dependent on duration of practice, which has seen researchers use the term to describe participants from students up to therapists with 4 years of experience, can no longer be supported.

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d. Questions were raised about the validity of traditional conceptualisations of clinical reasoning, recorded within the occupational therapy literature. These questions are based on advances in neuroscience and cognitive psychology (Kahneman 2011, Evans 2010). Examining current conceptions of clinical reasoning in the light of dual-process theory would suggest that the influence of system 2 (conscious) reasoning is overplayed and the influence of system 1 (unconscious/pre-conscious) reasoning is underplayed. Understanding of clinical reasoning continues to evolve (Unsworth 2011) and should remain a topic worthy of study to occupational therapy researchers. However, it is vital that this research is not conducted in professional isolation but incorporates advances in understanding made elsewhere.

6.3: Contextualisation and Implications of the Recommendations

While adopting the concept generalisation categories suggested by Lewis and Ritchie (2003) above, assisted the author to logically structure the study recommendations, it was recognised that for the reader an alternative organisation of the recommendations might add focus and be of assistance in determining the relevance of the recommendations to their particular area of practice. In this section the extrapolated recommendations of the study will briefly be outlined under the sub-headings; education, research, practice and policy.

6.3.1: Undergraduate and Postgraduate Education

(i) Undergraduates in university and on practice education placement should be encouraged to further develop their pragmatic reasoning skills. This may require, for example, review of the practice education assessments, commitment from practice educators and curriculum review and development incorporating enhanced work readiness and orientation.

(ii)   Formal training in clinical supervision for supervisors should be available and training in clinical supervision should be mandatory in the induction of new graduates. Effective practices in clinical supervision for both supervisors and supervisees have been established elsewhere, (Hunter and Blair 1999, College of Occupational Therapists 2010b), but facilitation of thinking and reasoning should be explicitly recognised as being central to clinical supervision and thereby professional development. Time for critical reflection and critical reasoning should be incorporated into new graduates' schedules.

6.3.2 Research

(i)   Urgent attention should be given to the planning and design of action research projected to cyclically develop and evaluate a complex case discharge algorithm.

(ii)   Further investigation is required into the process of transitioning in order to test the theory developed in this study. In particular it would be interesting to understand whether the theory is transferrable across geographical and professional boundaries.

(iii)   Further investigation is required in order to better understand, define and reconceptualise the meanings and criteria attached to a number of the terms used in studies of transitioning, skills acquisition and professional development. For example, what does it mean to be an expert, when does a new graduate cease to be new, i.e. what are the characteristics that denote self perceived capability and competence and how well do these self perceptions triangulate with the perspectives of others?

(iv)   It is important that researchers continue to examine the thinking and reasoning of occupational therapists and other health and social care professionals as these processes underpin virtually all interactions with patients, clients, caregivers and other team members. Questioning existing theoretical understandings in the light of developing evidence from other fields of investigation will be critical to this type of research.

6.3.3 Practice

(i)   Characteristics of new graduates experiencing the shock of practice have been identified in this study and by others (Kramer 1974, Duchscher 2008). These are known to impede development and transitioning of new graduates and have the potential to inhibit optimal patient treatment. Supervisors and managers should be able to identify, anticipate and intervene to address these characteristic dispositions and behaviours in order to better facilitate successful transitioning. New graduates should be aware of the maladaptive characteristics associated with the shock of practice and appropriate adaptive strategies expected to address these.

6.3.4 Policy

(i)   Consideration should be given to the establishment of a probationary year for new graduates. Ring fenced time for Continuous Professional Development activities allied to enhanced Preceptorship or mentoring and focussed on critical thinking should be at the core of this initiative.

(ii)   Some work on reconceptualisation of the band 5 designation is required. It was apparent

that, while band 5 therapists in this study engaged in what are traditionally thought to be

advanced forms of clinical reasoning and work in situations of complexity, there were

inter and intra professional disparities in how band 5s were regarded and consequently

the expectations placed upon them.

6.4: Closing Remarks

The participants in the study gave their time willingly and appeared to engage fully in the

interviews. In phases 2 and 3 of the study the participants appeared to be highly motivated to

ensure that new graduate therapists had a positive experience during transition.   The

commitment to improving this experience can be evidenced through the early adoption of

Preceptorship within the Health Board, and the experiences described by the phase 1

participants.

The overall aim of the study was achieved in that the methodology adopted permitted the

researcher access to the participants' expectations, understandings and perceptions of the

critical thinking and clinical reasoning that they, either as new graduate occupational therapists

or as supervisors and managers, had observed or experienced during transitioning. Through

analysis of the participant interviews it was possible to identify beneficial practices, behaviours

and dispositions employed in facilitating the development of critical thinking and clinical

reasoning in the new graduates, as well as some which perhaps impeded transition. The

recommendations that have been made reflect understandings developed through analysis of

the data generated by the study and are broadly supported by review of the existing literature.

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APPENDIX 1: SEARCH STRATEGY, SEARCH TERMS AND KEY DATES

SEARCH STRATEGY, SEARCH TERMS AND KEY DATES

As identified within the main body of the text, the study evolved from pre-existing work

undertaken collaboratively with colleagues in the U.K. and United States. This focused on

undergraduate education; problem based learning and clinical reasoning and was subsequently

published as:

MCCANNON, R., ROBERTSON, D., CALDWELL, J., JUWAH, C and ELFESSI, A., 2004. Comparison of clinical reasoning skills in occupational therapy students in the USA and Scotland. *Occupational Therapy International*, *11*(3), pp. 160-176.

MCCANNON, R., ROBERTSON, D., CALDWELL, J., JUWAH, C. and ELFESSI, A. 2004. Students' perceptions of their acquired knowledge during a problem based learning case study. *Occupational Therapy in Health Care*, *18*(4), pp. 13-28.

ROBERTSON, D., MCCANNON, R., CALDWELL, J., JUWAH, C. and ELFESSI, A., 2005. Transatlantic collaborative teaching and learning via information and communications technology. *British Journal of Occupational Therapy*, *68*(10), pp. 438-446.

Concurrently the author was working with colleagues from throughout the university on an

artificial intelligence, case based reasoning project, which was subsequently published as:

TAYLOR, B., ROBERTSON, D., WIRATUNGA, N., CRAW, S., MITCHELL, D. and STEWART, E. 2007. Using computer aided case based reasoning to support clinical reasoning in community occupational therapy. *Computer Methods and Programmes in Biomedicine*, 87 (2), pp. 170-179.

Therefore the author had a pre-existing compilation of literature on which to draw during the

early stages of the project, when completing the PGDip in Research Methods and during the

subsequent transfer of registration to PhD. This was updated on an ongoing basis. As the study

progressed literature which had initially been difficult to obtain became more readily available.

For example, Dreyfus and Dreyfus (1980) which had been embargoed by the US military was

published for the first time online and Benner's (1982) early work published in the Journal of

Advanced Nursing became readily available. Particularly in the case of Benner, this improved the

author's appreciation of the sophistication of her work.

The search engines that the author used predominantly were Ingenta Connect, Medline, Cinhal and AMED. However, latterly the author became increasingly reliant on Google Scholar. Journals that were consistently reviewed on an ongoing basis were the British Journal of Occupational Therapy, the American Journal of Occupational Therapy, the Scandinavian Journal of Occupational Therapy, the Canadian Journal of Occupational Therapy and the Australian Occupational Therapy Journal. Other journals were reviewed periodically or where they were cited in papers in the above journals.

A comprehensive literature review was undertaken at the beginning of 2009 which built in to the PhD proposal submitted to NoSREC and NHS R&D in November 2009. This literature reviews was updated in mid 2011 as data collection was completed and in preparation for writing up; during the writing up process and finally all electronic references were checked in June 2012.

The comprehensive search in February 2009 examined literature from 2004-2009 and the search terms employed were:

                        complex
                        complexity
                        capability
                        critical
                        critique
                        criticality
                        clinical reasoning
                        education
                        novice
                        occupational therapy
                        problem based learning
                        pedagogy
                        phenomenology
                        transition

In general these searches were begun from "occupational therapy" with the Boolean "AND" and expanded as key articles were identified from the reference lists of the papers detected. The Birkbeck University IPA listserve was a significant source of literature pertaining to the IPA methodology. The RGU library had all but a few of the important texts and further books and

articles from, for example, the New Zealand Journal of Occupational Therapy were obtained by interlibrary loan.

APPENDIX 2: DEVELOPMENT OF THE STUDY AIM

Aim:

As is the nature of qualitative research, where theory and learning emerge during the accomplishment of the research, the overall aim of the study has undergone a number of revisions and these are listed below.

As stated in the author's transfer of registration report of 11.01.08:

"To evaluate to what extent critical thinking and clinical reasoning skills engendered in occupational therapy students during their education meet these students' needs on entry to practice as new graduates and to what extent their practice centred thinking skills meet the expectations of employers."

As stated in the author's viva voce clarification report of 26.02.08:

"The facet of occupational therapy under consideration is the development of critical thinking and clinical reasoning skills in undergraduate and newly qualified occupational therapists".

As stated in the author's online submission for ethical approval, via the Integrated Research Application Systems, to the North of Scotland Research Ethics Committee and NHS <NAME> Research & Development of 19.11.09 (ref no: 09/50802/116) for the first phase of the study:

"Are the critical thinking and clinical reasoning skills developed by student occupational therapists, during their undergraduate education, synonymous with those employed during the process of transition from student to competent, autonomous practitioner?

The aim of this study is to examine the critical thinking and clinical reasoning skills that occupational therapy graduates employ as newly autonomous practitioners and the means by which these skills develop".

As stated in the author's Notice of Substantial Amendment to the North of Scotland Research Ethics Committee and NHS <NAME> Research & Development of 15.02.11 for the phases two and three of the study:

"This study will examine the transition from student to practitioner from the perspective of both the new graduate and therapists in supervisory roles in an effort to provide a conceptual framework or model that will assist in understanding the educational interventions that are successful (or otherwise) in aiding this transition".

However, the all-encompassing aim for the study, which emerged through examination of commonality in these developing aims, reflexive interview and discussion with the principal supervisor of the two earliest interviews, became:

This study will examine and attempt to understand and conceptualise the critical thinking and clinical reasoning skills that occupational therapy graduates employ as newly autonomous practitioners, the means by which these skills develop to meet the expectations of employers and any barriers to development of these skills, from the perspectives of the new graduate, clinical specialist and manager.

APPENDIX 3: TOPIC GUIDE AND SEMISTRUCTURED INTERVIEWS PHASE 1

Robert Gordon University School of Health Sciences

Research Study: Semi-Structured Interview Protocol

SHS09/05 Thinking, reasoning and the "shock of practice".

Step	Name	Indicative Narrative		Complete
1	Thanks	Thanks for interest in the study and for completing and returning the agreement form. Record commencement time, subject number and date,		
2	Health & Safety	Check awareness of both interviewer and participant regarding evacuation & any other health and safety concerns, identify that room is in use, ensure that another member of staff knows we are there.		
3	Introduction	Plan: Review information sheet, if participant is happy to consent go through consent process,		
4	Assurances	Participant is free not to participate, no bearing on any future relationship, participant can pause or halt the interview at any time. Assurances regarding the audio recordings to ensure accuracy of the transcript		
5	Review Information Sheet	Can we go through the information sheet, can I highlight the assurances regarding confidentiality and anonymity.		
6	Address Questions	Do you have any questions? Are you happy to consent to participate in the study?		
7	Obtain Consent	Can we complete the consent form, can you initial the boxes indicated, can we both sign the form		
8	Recording	Check that participant is happy to proceed with the interview now, doesn't want comfort break, Can I turn on and check my recording levels / equipment, switch off mobile phones and pagers		
9	Begin, closed questions	Can we begin, the first few questions that I will ask are simply about your own background, your career and so on.		
10	Transition	Explain that the next part of the interview comprises open questions		
11	Begin open questions	Start with questions that are or should be straightforward, then transition, then key questions, finally summarising/ending question. Reassure that researcher is happy to restate or repeat questions as required.		
12	End Interview	Thank the participant, address any questions		
13	Future Arrangements	Researcher will write up transcript and send to participant for accuracy, further to analysis, researcher may contact the participant for clarification of any remaining issues, researcher will forward a summary of the findings to the participants		
14	Switch off recording	Inform the participant that audio-recording has ceased		
15	Thanks	Thank the participant, make sure they have contact details for any remaining questions. Record time of completion		
16	Reflexion	Complete immediate reactions in reflexive log		

Robert Gordon University School of Health Sciences

Research Study: Semi-Structured Interview Themes

Thinking, reasoning and the "shock of practice".

<u>Indicative Themes</u>

- Introduction: Describe plan for the interview, address health & safety concerns.
- Answer any questions about the research and obtain signed consent.
- Demographic details: time and experience since qualification as an OT, participation in induction schemes.
- Knowledge of critical thinking and clinical reasoning.
- Experience of using critical thinking and clinical reasoning.
- Examples of where critical thinking and clinical reasoning have been used.
- Barriers
- Reflections on transition
- Thanks
- Future arrangements

Robert Gordon University School of Health Sciences

Research Study: Semi-Structured Interview, Topic Guide

SHS09/05 Thinking, reasoning and the "shock of practice".

TO BE COMPLETED BY THE RESEARCHER

Subject number _____   Venue_____

Closed Questions.

How long have you been qualified as an occupational therapist? Years, Months.

How long have you been in employment with NHS <NAME>? Years, Months

What is your current job band? Band 5, Band 6

Is your post a rotational post?

If so, how many rotations have you completed?

What is your current area of work, clinical specialty?

Have you worked in any other areas or specialties, if so what?

Did you complete a formal staff induction process on commencing employment?

Have you or are you participating in the preceptorship scheme or any other programmes for new graduates, such as Flying Start?

Age?

Gender?

Robert Gordon University School of Health Sciences

Research Study: Semi-Structured Interview Topic Guide

SHS09/05 Thinking, reasoning and the "shock of practice".

TO BE COMPLETED BY THE RESEARCHER

OPENING QUESTION

Can you tell me about your current post, your client group, your team and your role within that team?

INTRODUCTORY QUESTION

In your opinion what would you say are the main differences between your role as a student on placement and your role as a new practitioner?

TRANSITION

How well did you feel prepared for the change between being a student and being a practitioner?

KEY QUESTIONS

I would like you to look at this model (Barnett 1992) which conceptualises critical thinking into three domains, (explain). Can you reflect on your time as a new practitioner and identify firstly critical incidents and secondly personal practices during your OT career that might relate to each domain?

I have a word cloud that illustrates some of the characteristics of a critical thinker. Can you look at the word cloud and relate some of these characteristics to your own practice and to the practice of people around you. Are there any other words that you might add to my word cloud? (Add any contributions to the word cloud)

My second word cloud illustrates some barriers to critical thinking. Can you look at the word cloud and relate some of these characteristics to your own practice and to the practice of people around you. Are there any other words that you might add to my word cloud? (Add any contributions to the word cloud)

If you consider Barnett's model and the two word clouds that we have produced, what would be the critical thinking skills that you personally employ most frequently, what are those that you employ least or never and what are the barriers to you employing those skills?

If we relate your answer to the previous questions to your time in university and your transition into work , are there critical thinking skills or characteristics that you feel were overemphasised in your course, are there any that were not emphasised enough, what would you change? Did you feel that the work that you did on critical thinking throughout your time in university prepared you for the workplace?

OFFER A BREAK

The next questions look at clinical reasoning and, again from the literature, I have drawn up a word cloud of some of the modes of clinical reasoning that different authors have identified. Can you look at the word cloud and relate some of these characteristics to your own practice and to the practice of people around you. I can help you by giving definitions for each of these modes. Are there any other words that you might add to my word cloud? (Add any contributions to the word cloud)

I have arranged these modes of clinical reasoning into a list. If we said that all of the clinical reasoning that you do is 100%, what percentage of your time would be dedicated to each mode of clinical reasoning? (record). Can you discuss your choices?

Again, looking at my list, and looking at your job, your experience, can you grade these modes of clinical reasoning from 1-7 with one being the most significant mode of clinical reasoning for you now and since commencing your post and seven the least, (record) can you discuss your choices? How does your answer to this question relate to the previous one?

If we relate your answer to the previous questions to your time in university and your transition into work , are there modes of clinical reasoning that you feel were overemphasised in your course, are there any that were not emphasised enough, what would you change? Did you feel that the work that you did on clinical reasoning throughout your time in university prepared you for the workplace?

ENDING QUESTION

If you were asked to come into university to speak to staff and students about the thinking skills required in transitioning from student to practitioner what would you say?

You have now completed the interview.

Thank you. Do you have any questions?

TOPIC GUIDE

THINKING, REASONING AND THE "SHOCK" OF PRACTICE

OBJECTIVES
To explore work circumstances
To gather and explore reflections on the transition to practice
To examine the critical thinking undertaken by the participants and barriers to
          that critical thinking.
To examine the modes of clinical reasoning employed by the participants

INTRODUCTION
Introduce study, information sheet, consent, confidentiality, timing, ethics etc.

1. Present circumstances:

Age

Gender

Duration since qualification and duration of employment

Induction process, flying start and preceptorship

Clinical specialties, current and past, job history

Previous experience and current post, team, role within the team

2. Transition to practice

Encourage reflection on experiences, contrasts, transitions, perceptions and key
events.

Role as a new practitioner – transition in from team role above

Contrast with student placement experience

Preparation / prepared for practice

First impressions

Learning and critical incidents, misconceptions, mistaken beliefs,

Sources of support

3. Critical Thinking

Use the Barnett word cloud / mind map to stimulate reflections, permit connections. Clarify concepts as required.
Use the Characteristics word cloud / mind map to stimulate reflection on experiences and perceptions. Clarify concepts as required. Participant adds to cloud.
Use the Barriers cloud to stimulate reflection on experiences and perceptions. Participant adds to cloud.
Explore experiences during transition fully including style, frequency and barriers.

Barnett

illustrate critical incidents

personal practices, practice of others

learning experiences during early period of practice

Characteristics

personal practices, practice of others – expand by addition to cloud

Barriers

personal practices, practice of others – expand by addition to cloud

Personal preferences and frequency of employing particular skills

Barriers to personal preferences

Transition from student and development of critical thinking skills in practice

Preparation / prepared for practice

4. Clinical Reasoning

Use the Modes word cloud / mind map, clarify concepts as required, permit participant to make additions
Explore how different modes are employed in practice by participant and by others, estimate balance, frequency and weighting / significance.
Explore experiences during transition fully.

Clinical reasoning modes related / applied to personal practice and practice of others – expand by addition to cloud

Balance

Frequency

Weighting / significance

Transition from student and development of clinical reasoning in practice

Preparation / prepared for practice

5. Winding Down Question

If you were asked to come into university to speak to staff and students about the thinking skills required in transitioning from student to practitioner what would you say?

6. End Interview

APPENDIX 4: TOPIC GUIDE PHASES 2 and 3

Robert Gordon University School of Health Sciences

Research Study: INDICATIVE Semi-Structured Interview Phase 2 Supervisors

SHS09/05 Thinking, reasoning and the "shock of practice".

TO BE COMPLETED BY THE RESEARCHER

Subject number _____   Venue_____

Closed Questions.

How long have you been qualified as an occupational therapist? Years, Months.

How long have you been in employment with NHS <NAME>? Years, Months

What is your current job band? Band 5, Band 6, Band 7

Is your post a rotational post?

What is your past experience?

What is your current area of work, clinical specialty?

Have you worked in any other areas or specialties, if so what?

Are you a practice educator?

Have you or are you participating in the preceptorship scheme or any other programmes for new graduates, such as Flying Start?

What is your experience of supervising staff?

Gender?

Age?

Robert Gordon University School of Health Sciences

Research Study: Semi-Structured Interview

SHS09/05 Thinking, reasoning and the "shock of practice".

TO BE COMPLETED BY THE RESEARCHER

OPENING QUESTION

Can you tell me about your current post, your client group, your team and your role within that team?

INTRODUCTORY QUESTION

Can you tell me about your transition between being a student and being a basic grade therapist? What were the most significant things that happened to you? How well did you feel prepared for the change between being a student and being a practitioner?

TRANSITION
As a supervisor of new basic grade or band 5 therapists what have been your most significant learning experiences

KEY QUESTIONS

The next questions are about the thinking skills and the development of thinking skills in newly qualified therapists.

I have a word cloud that illustrates some of the characteristics of a critical thinker. Can you look at the word cloud and relate some of these characteristics to your own practice and to the practice of the band 5 and basic grade therapists that you have supervised. Are there any other words that you might add to my word cloud? (Add any contributions to the word cloud)

My second word cloud illustrates some barriers to critical thinking. Can you look at the word cloud and relate some of these characteristics to your own practice and to the practice of the band 5 and basic grade therapists that you have supervised. Are there any other words that you might add to my word cloud? (Add any contributions to the word cloud)

I would like you to look at this model (Barnett 1992) which conceptualises critical thinking into three domains, (explain). Can you reflect on your time as a supervisor and identify how you might have seen or facilitated that kind of thinking in the person that you were supervising?

If you consider Barnett's model and the two word clouds that we have produced, what would be the critical thinking skills that you see new therapists employing most frequently, what are those that they employ least or never and what are the barriers to you employing those skills?

From the point of view of thinking skills how well were the basic grades you supervised prepared for the workplace?

OFFER A BREAK

The next questions look at clinical reasoning and, again from the literature, I have drawn up a word cloud of some of the modes of clinical reasoning that different authors have identified. Can you look at the word cloud and relate some of these characteristics to your own practice and to the practice of the band 5 and basic grade therapists that you have supervised. I can help you by giving definitions for each of these modes. Are there any other words that you might add to my word cloud? (Add any contributions to the word cloud)

Again, looking at my word cloud, and looking at your job and your experience as a supervisor, can you grade or rank these modes of clinical reasoning, thinking about the modes of clinical reasoning you favour and favour least and the kinds of clinical reasoning that the band 5 and basic grade therapists that you have supervised appear to favour and favour least?

From the point of view of clinical reasoning skills how well were the basic grades you supervised prepared for the workplace?

ENDING QUESTION

If you were asked to come into university to speak to staff and students about the thinking skills required in transitioning from student to practitioner what would you say?

You have now completed the interview.

Thank you. Do you have any questions?

Robert Gordon University School of Health Sciences

Research Study: Semi-Structured Interview, Topic Guide Phase 3 Managers

SHS09/05 Thinking, reasoning and the "shock of practice".

TO BE COMPLETED BY THE RESEARCHER

Subject number _____   Venue_____

Closed Questions.

How long have you been qualified as an occupational therapist? Years, Months.

How long have you been in employment with NHS <NAME>? Years, Months

What is your current job band and title? Band

What is your current area of responsibility, what clinical specialty do you manage?

Do you currently have any clinical commitment?

Are you a practice educator?

What commitment do you have to students?

Have you worked in any other areas or specialties, if so what?

How many staff do you manage or supervise / grades / rotations?

Have you or are you participating in the preceptorship scheme or any other programmes for new graduates, such as Flying Start? Do you have a role in eKSF or any other responsibilities for training?

Can you tell me a bit about how training is organised within your service

Can you tell me a bit about how clinical supervision is organised within your service

Age

Robert Gordon University School of Health Sciences

Research Study: Semi-Structured Interview Topic Guide

SHS09/05 Thinking, reasoning and the "shock of practice".

INTRODUCTORY QUESTION

Thinking back, can you tell me about your transition between being a student and being a basic grade therapist? What were the most significant things that happened to you? How well did you feel prepared for the change between being a student and being a practitioner?

TRANSITION

Again perhaps thinking back, as a supervisor or manager of new basic grade or band 5 therapists what have been your most significant learning experiences

KEY PROMPTS

I'd like to look at the thinking skills and the development of thinking skills in newly qualified therapists.

I would like you to look at this model (Barnett 1992) which conceptualises critical thinking into three domains, (explain). Can you reflect on your time as a supervisor / lead therapist / manager and identify how you might have maintained that kind of thinking in your own practice and seen or facilitated that kind of thinking in your staff or in the people that you were supervising?

I have a word cloud that illustrates some of the characteristics of a critical thinker. Can you look at the word cloud and relate some of these characteristics to your own practice, to the practice of people around you and to the practice of the band 5 and basic grade therapists. Are there any other words that you might add to my word cloud? (Add any contributions to the word cloud)

My third word cloud illustrates some barriers to critical thinking. Can you look at the word cloud and relate some of these characteristics to things you might have observed or seen in your own practice and in the practice of people around you again perhaps thinking in particular about the band 5 therapists. Are there any other words that you might add to my word cloud? (Add any contributions to the word cloud)

If you consider Barnett's model and the two word clouds that we have produced, what would be the critical thinking skills that you see new therapists employing most frequently, what are those that they employ least or never and what are the barriers to them employing those skills?

From the point of view of thinking skills how well were, or are, the band 5s or basic grades in your service prepared for the workplace?

I want to move on to look at clinical reasoning and, again from the literature, I have drawn up two word clouds of some of the modes of clinical reasoning that different authors have identified. Can you look at the word cloud and relate some of these characteristics to the practices of people around you. *I can help you by giving definitions for each of these modes.*

Again, looking at my word clouds, and looking at your job and your experience as a lead/ manager or supervisor, can you grade or rank these modes of clinical reasoning, thinking in particular about the kinds of clinical reasoning that the basic grade therapists that you have supervised appear to favour but also perhaps other therapists at different grades? How are clinical reasoning skills developed within your service?

From the point of view of clinical reasoning how well were the band 5s or basic grades in your service prepared for the workplace on entry?

ENDING QUESTION

If you were asked to come into university to speak to staff and students about the thinking skills required in transitioning from student to practitioner what would you say?

You have now completed the interview.

Thank you. Do you have any questions?

APPENDIX 5: WORD CLOUDS

WORDCLOUD 1: FORMS OF CRITICALITY ADAPTED FROM BARNETT (1997).

WORDCLOUD 2: TERMS ASSOCIATED WITH CRITICAL THINKING.

WORDCLOUD 3: TERMS ASSOCIATED WITH BARRIERS TO CRITICAL THINKING.

WORDCLOUD 4: CLINICAL REASONING SIMPLIFIED FROM OCCUPATIONAL THERAPY LITERATURE.

WORDCLOUD 5: FORMS OF REASONING FROM ARTIFICIAL INTELLIGENCE LITERATURE.

Critical
Self
Reflection

Critical
Action

CRITICAL
THINKING

Critical
Reason

precision

thorough

logical

accuracy

communication

active thinking

skilled reasoning

interpretation

interpretation

bias recognition

questioning

reflection

problem recognition

metacognition

problem solving

disposition

information gathering

fairness

language use

analysis

relevance

clarity

evaluation

decision making

consistent

depth

enquiry

Face-saving

Provincialism

Wishful thinking

Fear of change

Self-deception

Distrust in reason

Selective memory

Unwarranted assumptions

Lack of relevant background information

Conformism

Egocentricism

Selective perception

Superstition

Scapegoating

Poor reading skills

Short-term thinking

Stereotyping

Close-mindedness

Rationalisation

Communication

Overpowering emotions

Prejudice

Peer pressure

Sociocentricism

Bias

NARRATIVE REASONING

PROCEDURAL REASONING

CONDITIONAL REASONING

CLINICAL REASONING

INTERACTIVE REASONING

PRAGMATIC REASONING

APPENDIX 6:

DOCUMENT 1: VOLUNTEER INFORMATION SHEET PHASE 1

DOCUMENT 2: VOLUNTEER INFORMATION SHEET PHASES 2 AND 3

**ROBERT GORDON
UNIVERSITY·ABERDEEN**

VOLUNTEER INFORMATION SHEET

Study Title: A phenomenological consideration of the impact on thinking and reasoning of transitioning from student to novice occupational therapist from the perspectives of novices, supervisors and managers

Short Title: Thinking, reasoning and the "shock of practice"

Invitation:

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask the researcher if there is anything that is not clear or if you would like more information. Take time to decide whether you wish to take part. Thank you for reading this.

The purpose of the study:

The overall aim of this study is to examine the nature and modes of thinking and reasoning required of new occupational therapy practitioners making the transition into practice. The study will concentrate on the critical thinking and clinical reasoning skills that graduates employ as newly autonomous practitioners and the means by which these skills are developed. In common with other health professions, the ability to think critically and reason effectively in complex situations is vital to the practice of occupational therapy (Duncan et al 2007).

It has been suggested (Fraser & Greenhalgh 2001) that the key attribute of successful health professionals in the complexity of 21st century practice is and will be "capability" which has been defined as "the ability to adapt to change, generate new knowledge and continue to improve performance" (Fraser & Greenhalgh 2001: 799). The achievement of capability can be seen as being dependent on the ongoing development of cognitive and metacognitive processes such as critical thinking and clinical reasoning.

Evidence from the nursing (Duchscher 2009, Kramer 1974) and medical (Boshuizen 1996) professions suggests that new graduates entering practice experience what is variously termed "reality shock", "transition shock" or the "shock of practice", one consequence of which may be a dip in effective clinical reasoning (Boshuizen 1996). It is unclear at what stage or rate the skills, knowledge and attitudes fostered in undergraduates become diminished or redundant.

The exploratory phase of the study, which involves interviewing new graduates such as yourself, will last for 4 months.

Why have you been chosen?

You have been chosen along with up to 7 other subjects to participate in the study as you meet the criteria for inclusion, that is, you are a recent graduate of an occupational therapy programme and you are in the employment of NHS <Name>>.

Do you have to take part?

No, taking part is voluntary, it is up to you to decide whether to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. If you would prefer not to take part you do not have to give a reason. If you later change your mind you can withdraw from the study at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in any way.

What will happen to me if I take part?

This study lasts for four months and is part of a larger piece of work. Selected occupational therapists employed by NHS <<Name>> will be invited to take part. If you agreed to take part you would participate in a semi-structured interview which will be audio-recorded. The interview will last for no more than two hours and will take place in your work environment at a mutually agreed convenient time within the data collection period. I will send you a copy of the interview transcripts for you to confirm their accuracy. During data analysis I may ask for a second brief meeting, only if required, to address any questions or issues raised during the process. Your manager has agreed to support this study and the semi-structured interview will take place at a pre-arranged mutually convenient time in your workplace.

What are the possible disadvantages and risks of taking part?

No risks have been identified as your contribution to the project is limited to participation in a semi-structured interview. There is no cost to you and there is no compensation for participation in the project.

What are the possible benefits of taking part?

Whilst this study seeks to identify the critical thinking and clinical reasoning required of new graduate therapists and will therefore not benefit you directly, you may benefit from participation in the project through enhancement of your understanding of the transition from new graduate to practitioner.

Knowledge and insights gained from this project will be collated and may be disseminated as research findings in the forms of publications in journal articles, conference or seminar paper presentations, for the purpose of contributing to the development of scholarly activity. While respecting individual anonymity, the contribution of participants in this project will be duly acknowledged in any presentation of findings.

Will my taking part in this study be kept confidential?

All information, which is collected about you during the course of the research will be kept strictly confidential. Your participation and contributions to the research project will be treated in the strictest confidence and will not in any way be personally attributed to you.

Who has reviewed the study?

The study has been reviewed by the North of Scotland Research Ethics Committee (REC Reference Number 09/S0802/116)

What do I do now?

If you agree to participate in this study you should complete and return the agreement form in the prepaid envelope to the principal researcher and a time for your participation in the semi-structured interview will be negotiated with yourself and your line manager. Please also read the consent form which is enclosed. I will ask you to sign two copies of this form prior to undertaking the interview and you will be given one to keep. The other copy will be kept by the researcher.

Thank you very much for considering taking part in this study. Please discuss this information with your family, colleagues & friends if you wish. If you have any further questions about your possible participation in the study, please do not hesitate to contact the principal researcher at the address below.

David Robertson

Lecturer

Robert Gordon University

School of Health Sciences

Aberdeen

AB10 7QG

david.robertson@rgu.ac.uk

01224 263269

**ROBERT GORDON
UNIVERSITY·ABERDEEN**

VOLUNTEER INFORMATION SHEET PHASES 2 AND 3

Study Title: **A phenomenological consideration of the impact on thinking and reasoning of transitioning from student to novice occupational therapist from the perspectives of novices, supervisors and managers**

Short Title: **Thinking, reasoning and the "shock of practice"**

Invitation:

You are being invited to take part in a research study. Before you decide it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask the researcher if there is anything that is not clear or if you would like more information. Take time to decide whether you wish to take part. Thank you for reading this.

The purpose of the study:

The overall aim of this study is to examine the nature and modes of thinking and reasoning required of new occupational therapy practitioners making the transition into practice. The study will concentrate on the critical thinking and clinical reasoning skills that graduates employ as newly autonomous practitioners and the means by which these skills are developed. In common with other health professions, the ability to think critically and reason effectively in complex situations is vital to the practice of occupational therapy (Duncan et al 2007).

It has been suggested (Fraser & Greenhalgh 2001) that the key attribute of successful health professionals in the complexity of 21st century practice is and will be "capability" which has been defined as "the ability to adapt to change, generate new knowledge and continue to improve performance" (Fraser & Greenhalgh 2001: 799). The achievement of capability can be seen as being dependent on the ongoing development of cognitive and metacognitive processes such as critical thinking and clinical reasoning.

Evidence from the nursing (Duchscher 2009, Kramer 1974) and medical (Boshuizen 1996) professions suggests that new graduates entering practice experience what is variously termed "reality shock", "transition shock" or the "shock of practice", one consequence of which may be a dip in effective clinical reasoning (Boshuizen 1996). It is unclear at what stage or rate the skills, knowledge and attitudes fostered in undergraduates become diminished or redundant.

This phase of the study, which involves interviewing experienced therapists such as yourself, will last for 6 months.

Why have you been chosen?

You have been chosen along with up to 19 other subjects to participate in the study as you meet the criteria for inclusion in this phase, that is, you are an experienced occupational therapist who is involved in providing supervision to band 5 occupational therapists and you are in the employment of NHS <<Name>>.

Do you have to take part?

No, taking part is voluntary, it is up to you to decide whether to take part. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. If you would prefer not to take part you do not have to give a reason. If you later change your mind you can withdraw from the study at any time and without giving a reason. A decision to withdraw at any time, or a decision not to take part, will not affect you in any way.

What will happen to me if I take part?

This phase of the study lasts for six months and is part of a larger piece of work. Selected occupational therapists employed by NHS <<Name>> will be invited to take part. If you agreed to take part you would participate in a semi-structured interview which will be audio-recorded. The interview will last for no more than two hours and will take place in your work environment at a mutually agreed convenient time within the data collection period. I will send you a copy of the interview transcripts for you to confirm their accuracy. During data analysis I may ask for a second brief meeting, only if required, to address any questions or issues raised during the process. Your manager has agreed to support this study and the semi-structured interview will take place at a pre-arranged mutually convenient time in your workplace.

What are the possible disadvantages and risks of taking part?

No risks have been identified as your contribution to the project is limited to participation in a semi-structured interview. There is no cost to you and there is no compensation for participation in the project.

What are the possible benefits of taking part?

Whilst this study seeks to identify the critical thinking and clinical reasoning required of new graduate therapists and will therefore not benefit you directly, you may benefit from participation in the project through enhancement of your understanding of the transition from new graduate to practitioner.

Knowledge and insights gained from this project will be collated and may be disseminated as research findings in the forms of publications in journal articles, conference or seminar paper presentations, for the purpose of contributing to the development of scholarly activity. While respecting individual anonymity, the contribution of participants in this project will be duly acknowledged in any presentation of findings.

Will my taking part in this study be kept confidential?

All information, which is collected about you during the course of the research will be kept strictly confidential. Your participation and contributions to the research project will be treated in the strictest confidence and will not in any way be personally attributed to you.

Who has reviewed the study?

The study has been reviewed by the North of Scotland Research Ethics Committee (REC Reference Number 09/S0802/116)

What do I do now?

If you agree to participate in this study you should complete and return the agreement form in the prepaid envelope to the principal researcher and a time for your participation in the semi-structured interview will be negotiated with yourself and your line manager. Please also read the consent form which is enclosed. I will ask you to sign two copies of this form prior to undertaking the interview and you will be given one to keep. The other copy will be kept by the researcher.

Thank you very much for considering taking part in this study. Please discuss this information with your family, colleagues & friends if you wish. If you have any further questions about your possible participation in the study, please do not hesitate to contact the principal researcher at the address below.

David Robertson

Lecturer

Robert Gordon University

School of Health Sciences

Aberdeen

AB10 7QG

david.robertson@rgu.ac.uk

01224 263269

APPENDIX 7

AGREEMENT BY VOLUNTEER TO BE CONTACTED BY THE CHIEF INVESTIGATOR

ROBERT GORDON UNIVERSITY·ABERDEEN

Participant No. ☐ ☐ ☐

ROBERT GORDON UNIVERSITY

AGREEMENT FORM

AGREEMENT BY VOLUNTEER TO BE CONTACTED BY THE CHIEF INVESTIGATOR

Name of Study: Thinking, reasoning and the "shock of practice".

Name of Volunteer: (**BLOCK CAPITALS** please)

....

Please initial section 1 below and then section 2 **or** section 3	Volunteer Initials
1. I have read the enclosed volunteer information sheet and consent form.	
2. I am interested in being a participant in the study "Thinking, reasoning and the "shock of practice" and agree to be contacted by the chief investigator.	
3. I have no interest in being a participant in the study	

Worksite:

Contact Details (please indicate whether you prefer to be contacted by phone or e-mail):

Days/hours of NHS <<Name>>. Employment:

If you have any questions about participation in the study, please contact:

Chief Investigator: **DAVID ROBERTSON**
LECTURER
ROBERT GORDON UNIVERSITY, ABERDEEN
SCHOOL OF HEALTH SCIENCES
ABERDEEN
AB10 7QG
david.robertson@rgu.ac.uk
01224 263269

**PLEASE RETURN THIS FORM IN THE STAMPED ADDRESSED ENVELOPE
PROVIDED**

APPENDIX 8: INFORMED CONSENT

ROBERT GORDON UNIVERSITY•ABERDEEN

Subject No. ☐ ☐ ☐

ROBERT GORDON UNIVERSITY

CONSENT FORM

CONSENT BY VOLUNTEER TO PARTICIPATE IN:

Name of Study: Thinking, reasoning and the "shock of practice".

Name of Volunteer: ....

Chief Investigator: DAVID ROBERTSON

	Volunteer Initials
I have read the volunteer information sheet on the above study and have had the opportunity to discuss the details with David Robertson (Chief Investigator) and ask questions.	
The nature and purpose of the study has been explained to me. I understand fully what is proposed and what my participation in the study entails.	
I agree to take part in the study as it has been outlined to me, but I understand that I am completely free to withdraw from the study or any part of the study at any time I wish.	
I understand that, under the terms of the Data Protection Act (1998), by consenting to participate in this project, I give consent for my contributions to be recorded by means of audio-recording.	
I further give the investigators, named above, permission to hold copies of any audio-recordings taken and for their use solely for the purpose of this research project. Copies of audio-recordings will be held securely and will not be passed to any third parties.	
I understand that this study is part of a research project designed to promote the understanding of learning experiences and the transition to practice, and may be of no benefit to me personally.	

I hereby fully and freely consent to participate in the study, which has been explained to me.

Signature of Volunteer:

             ....

Date: ....

I confirm that I have explained to the volunteer named above, the nature and purpose of the study to be undertaken.

Signature of Investigator:

             ....

Date: ....

APPENDIX 9: EXISTING AND PAST SUPERVISORY RELATIONSHIPS BETWEEN PARTICIPANTS.

Appendix 9: Diagrammatic representation of existing and past supervisory relationships between participants.

N.B.: 51 Ruth and 56 Mary were employed in the same post at the time of their interviews as the rotation had taken place in the intervening period.

Key 1: At the time of interview provided clinical supervision

At the time of interview provided line management but not direct supervision
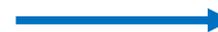
Past clinical supervisor

Past line manager
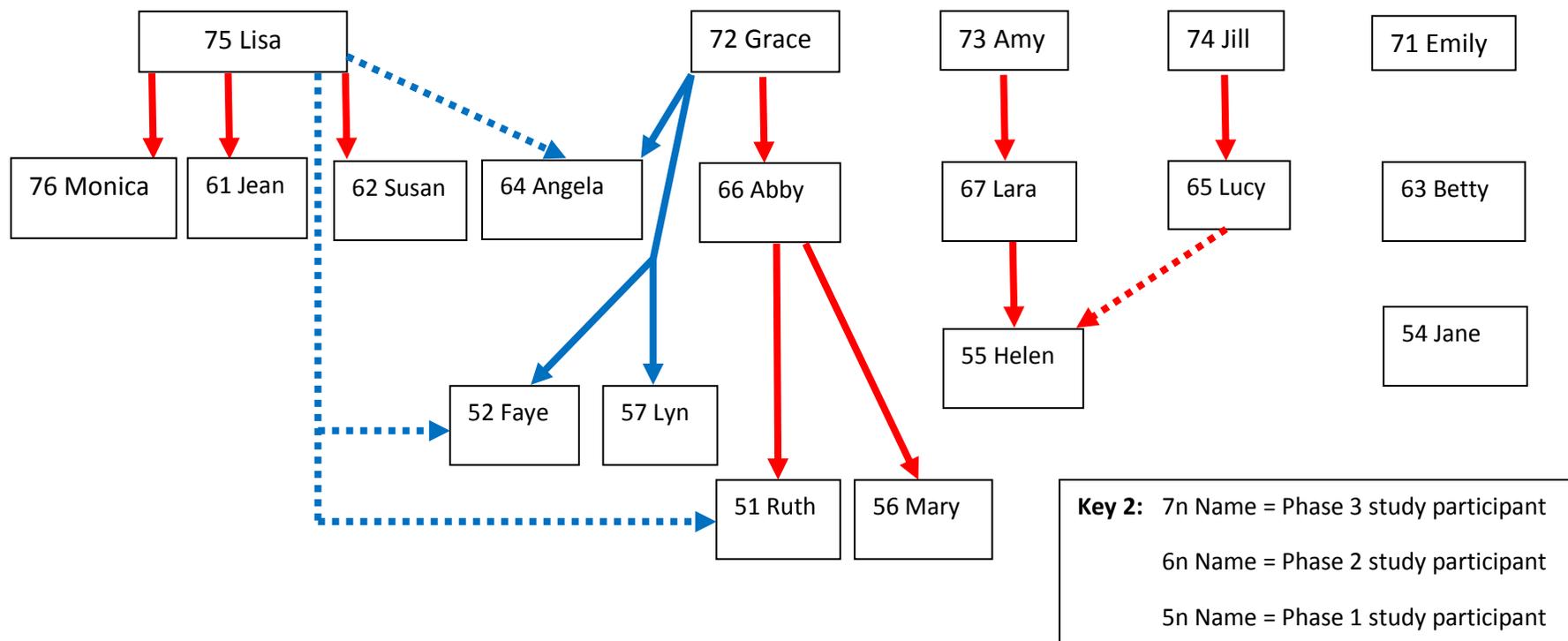
APPENDIX 10: ABSTRACTED THEMES PHASE 1, PHASE 2 AND PHASE 3

Table of Abstracted Themes: Phase 1 New Graduates

No	Step 3 AbsThemes
AT1	Scared/Fear/Apprehension/Stress/Overwhelmed/Exhaustion
AT2	Learning through doing
AT3	Centrality of OT team in learning & development
AT4	Critical importance of new grad/ supervisor relationship
AT5	Engaging with complexity
AT6	Capability vs Passivity
AT7	Transitioning, induction and orientation positive and problematic
AT8	Communication positive and problematic
AT9	Procedure/Process/Limiting Role/Reasoning
AT10	Confidence / Capability/Competence issues
AT11	Discharge Planning
AT12	Client Centred Practice
AT13	Complex Reasoning
AT14	Routines
AT15	Myths and Memes
AT16	Politico-financial constraints
AT17	Initiating / contributing to changes in practice
AT18	Engagement in off-site research / training
AT19	Development of thinking and reasoning through the MDT

Table of Abstracted Themes: Phase 2 Supervisors

No	Step 3 Abstracted Themes
AT1	Supporting Band 5s
AT2	Support for development of thinking
AT3	Learning through doing
AT4	Complexity of Practice
AT5	Complex Reasoning
AT6	Discharge Planning
AT7	Communication
AT8	Supervisor Confidence: Autonomy vs. Risk
AT9	Supervisor Competence & Capability
AT10	Political / financial impact
AT11	Anxiety / transition
AT12	Expectations
AT13	Supervision Issues
AT14	MDT working
AT15	Memes

Table of Abstracted Themes: Phase 3: Managers

No	Step 3 AbsThemes
AT1	Operational issues self
AT2	Operational issues staff
AT3	Operational Issues Band 5s
AT4	Experience Self Transition
AT5	Experience Self
AT6	Expectations - Self
AT7	Expectations - Others
AT88	Expectations Band 5s
AT9	Perceptions
AT10	Perceptions Band 5s
AT11	Memes
AT12	Expectations Student Experience
AT13	Perceptions Student Experience

APPENDIX 11: EXTRACTS FROM REFLEXIVE DIARIES

Reflexive Diary Extracts

1.   The first anonymised example demonstrates the structure that I used immediately pre and post interview.

<<Name>>

<<Date>>

<<Location>>

Context: <<Context>> <<Time>>, artificially lit, small hospital office, comfortable/warm room temperature. A bit claustrophobic.

Pre-interview: Feeling quite excited at finally getting to collect some data, looking forward to the interview, wanting things to go well, anxieties re recording equipment, have I over-prepared? Interview technique – is this different from patient interviewing? How do I put as little of myself in here as possible? Limiting time to an hour?

Personally – fending off time pressures from all the stuff I have to do for work., marking projects etc. Trying to remove myself from that in order to get this interview to go as well as possible, trying to relax into it.

Previous relationships – class tutor/lecturer – student for 4 years

I'll be interested to hear how she is doing.

Post-interview: Relief, that went okay, finished in 1.05 hours – good timing, all audio seemed to work, a couple of interruptions/background noise but should be okay. Probably took too long on the critical thinking part and rushed the clinical reasoning part.

Content: I'm now very conscious that I've never formally supervised a band 5 or basic grade therapist. Surprised about how quickly skills become redundant – 3 months, also fear and anxiety re induction and rotation transitions, establishing professional identity, developing/learning through doing.

.

Learning: Is communication a critical thinking skill? How do new grads develop a professional identity? Importance of supervision? Centrality of OT team? Need to review time balance of interviews.

Reflexive Diary Extracts

2.   This example is extracted from a day during the phase 2 analysis process, emergent themes were being related to understandings gained from review of the literature.

Reflections from analysis <<Date>>

Discharge Planning

Discharge planning is an anxiety and conflict provoking process for new therapists, the MDT, experienced therapists and supervisors balancing autonomy and risk?

Discharge planning appears to be based on clinical judgement based on experience. Band 5 therapists have neither the experience nor the self perceived confidence to articulate their clinical judgement?

Kahneman (p222) and others (Dawes, Meehl) suggest that, in decision making, algorithms are superior to clinical judgement and superior to that are algorithms plus clinical judgement.

Should the occupational therapy profession urgently consider development of a discharge planning algorithm? Similar examples would be the Waterlow scoring system for assessment of pressure sore risk or the Apgar score in the delivery room.

Algorithms do not reduce professionalism, they support clinical decision making?

Model Based Reasoning

Is this unhelpful in situations of complexity?

MOHO – major underpinning component is volition but neuroscientific advances question the existence of volition as conceptualised by Keilhofner. (Anil Seth – eight questions science must answer)

Reflection

Therapists appear to employ reflection on action and in action?

This is variable – inexperienced therapists look for a model or process to support reflection or if overwhelmed are unable to reflect in or on action? What is underpinning this conflict?

Supervisors recreate good experiences, the first post is a critical learning experience

Do supervisors attempt to recreate their own transition?

Supervisors – self-perceived poor reading skills

There is literature on this from Australian studies of EBP in OT, reading/analysing literature is problematic (? Bennet et al)

Reflexive Diary Extracts

3.   This example is a short extract from a one hour and twelve minute reflexive interview undertaken with a peer who had recently completed a PhD using a qualitative methodology and who interviewed health professionals. This reflexive   interview was transcribed and analysis of the understandings gained are incorporated into the thesis.

Interviewer – what specifically about these two former students might you have had in mind in which you had to shut off, what qualities about them as you knew them here

Researcher – Primarily it was communication skills I guess, that is probably the most important skill that these folks have and it's (.) as a student one of those (.), I probably couldn't remember what they were like academically but I could certainly remember what they were like as communicators as students, just from the level of communication with staff and their maturity and things like that, I guess that was you know a couple of years ago and they will be, I would hope, they would be very, very different people now than they were as undergraduates. So I had to think quite carefully about that. (.) The expectations that I carried. (.) From the previous studies, my interest in critical thinking and the sort of facilitation of critical thinking skills in undergraduates, I guess some sorts of biases that I would have brought from talking to new graduates in practice who have gone through that shock of practice so that maybe I wasn't looking for things surrounding the shock of practice (.) rather than just allowing people to talk freely, talk openly because I think that if somebody had mentioned something surrounding I don't know, disagreements, adjustments, feeling bad, feeling you know incompetent, those kind of things. I think that would have sparked something in me to ask supplementary questions rather than the things that then went really well, you know.   So I'm kinda bringing that bias to it as well, so I think those were probably the kind of main things.

Interviewer- What about some of the cultural factors, em, as impacting on reflexivity?

Researcher – I mean the, (.) I mean I guess the, (.) I have to look at my own sort of cultural norms as a white Anglo Saxon male, em quite Scottish male, in a very predominantly female profession and you know how I'm perceived as a male. I would guess that the vast majority of people that I will be interviewing, (.) if I interview one male out of the twenty I will be lucky. Em, so there are some of those kind of cultural things that impact I guess. Just being from the ▮▮▮▮▮▮▮, being quite reticent, talking yourself up or talking about yourself or talking about your studies or things like that I guess that those kind of things maybe impact as well em and then thinking about the cultures of Occupational Therapy em I mean one of the things that has been really interesting is the (.) kind of just talking to the two people I've talked to so far is about the fact that they looked to the one profession for support. They don't…there is no support offered from the wider team or very little support offered from the wider team and they don't really know the wider team that well but they're very close to other Occupational Therapists and there seems to be that kinda cultural thing em so there's kinda my own culture, there's the culture in the institutions em and then I guess the culture of the ▮▮▮▮▮ as well like you know.