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An investigation into the theoretical construction of effort and maximum effort as a contribution to the Theory of Creative Ability

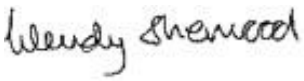
Wendy Jayne Sherwood

A thesis submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in fulfilment of the requirements for the degree of Doctor of Philosophy

Johannesburg 2016

Declaration

I, Wendy Sherwood declare that this research report is my own work. It is being submitted for the degree of Doctor of Philosophy in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.



[Signature of candidate]

06 June 2016

Dedication

In memory of my parents Bryan Wyer and Beryl Tibbitts, who instilled in me the belief that I could do anything if I was willing to put in the effort.

Presentations arising from the study

Sherwood, W. What is effort and maximum effort? 3rd International Vona du Toit Model of Creative Ability Conference, London, 2013.

Sherwood, W.J., Casteleijn, D., Taylor, C. Effort as fundamental to motivation and participation: a theory for occupational therapy. College of Occupational Therapists' Annual Conference, Brighton, 2013.

Abstract

This thesis is concerned with the occupational therapy profession's development of its theoretical basis for practice. In an occupational therapy theory entitled the Theory of Creative Ability, the concepts effort and maximum effort are hypothesised to be essential to activity participation. A critical evaluation of the Theory of Creative Ability in this thesis identifies that effort is not defined, and maximum effort is inadequately defined, which makes the theory weak and potentially operationally inadequate. Furthermore, there is little evidence that effort is a construct that is well understood in the occupational therapy profession. The purpose of the current study was to discover the theoretical construction of effort as a contribution to the Theory of Creative Ability, and to the occupational therapy profession as a whole.

Using Grounded Theory Methodology, the study analysed data from 11 occupational therapists in South Africa, 7 occupational therapists in the United Kingdom (UK), 29 patients receiving occupational therapy in mental health and physical health care in South Africa, and 24 members of the public in the UK. Field observations of occupational therapy with patients in South Africa, the literature and the media, were also data for analysis. The resulting emergent grounded theory was then verified as plausible by occupational therapists and members of the public in an on-line focus group. A full literature review was then undertaken for integration, leading to minor modifications to the grounded theory. Key aspects of the theory were aligned with the Theory of Creative Ability. Many aspects of the grounded theory were compatible, but that there are differences in how minimal and maximum effort are conceptualised in relation to activity participation.

Finally, a formal grounded Theory of Effort for Relating was developed as a result of conceptual comparison of the emergent grounded theory with other theoretical works. At the heart of the formal grounded theory is the discovery that effort is a fundamental criterion of the self, essential for relating an individual to himself and the world. The formal grounded theory explains effort as varying in quantity and quality as a reflection of the quantity and quality of one's motivation and total resources. The conditions, observable referents, and consequences of effort are explained. A decision-making process, leading to a decision for effort, and ultimately to the quantity and quality of one's effort, is also explained.

Acknowledgments

I thank my husband for his endless patience, support, love, encouragement and good humour over the course of this thesis.

I also thank all of those who offered advice and reassurance during the research process; in particular I thank my friends and family. Thank you to London South Bank University, which during my employ provided time for study.

Thank you to my supervisors, Ass. Prof. Daleen Casteleijn and Dr Clare Taylor for their patience, guidance and understanding, whilst supporting this monumental effort.

Finally, I express my sincere appreciation to all who participated in this study, particularly the people that I encountered as patients in South Africa. I was humbled by their generosity and I have been inspired by their contributions.

Preface

This thesis has developed out of my 25 year interest, as an occupational therapist, in what drives and enables people to do what they do. Approximately 12 years ago, I happened across the occupational therapy theory, the Theory of Creative Ability (du Toit 1973, 1974), which has significantly enhanced my understanding in this regard. With a renewed respect for the importance of theory to practice, I embarked upon the current study, as a contribution to the occupational therapy profession, specifically to the Theory of Creative Ability.

This thesis presents a grounded theory study, which leads to a formal grounded theory. This necessitates that the structure of the thesis departs from the standard format, because Grounded Theory Methodology dictates that literature should not be consulted until the commencement of data collection and analysis, as the literature is data that contributes to the discovery of theory. What is more, reading the literature on the phenomenon under study could taint the researcher's thinking (Glaser 1992). During data collection and analysis, literature on emergent concepts was sampled to support conceptual understanding, but a review of literature on effort *per se* was not undertaken until the emergent grounded theory was established and written-up as findings (Chapter Six). Therefore, the literature review is situated post the findings chapter, informing the discussion (Chapter Eight), leading to the development of a formal grounded theory (Chapter Nine).

The structure of the thesis is set out below, followed by an explanation of the writing style adopted in this thesis.

Due to the positioning of the full literature review, this thesis begins with an extended introductory chapter (**Chapter One**), which explains the background to the study. This chapter concludes with stating the research question, aims and objectives that were borne out of the identified gaps in knowledge in the occupational therapy profession. **Chapter Two** presents the philosophical and methodological framework of the study, justifying the selection of the classic grounded theory approach to address the research question and study aims. The final section of this chapter discusses approaches for developing formal grounded theory, indicating that developing formal grounded theory is a creative process open to the use of multiple sources of data and data collection methods. The chapter closes with an overview of how the current three stage study aims to generate a substantive grounded theory leading to a formal grounded theory.

Chapter Three describes the application of the classic grounded theory approach through the methods selected for Stage One of the study. Throughout this chapter, stages of the research process are made explicit, referring the reader to reflexive accounts in Chapters Five (Ethics) and Eleven (Contributions and Recommendations) for in-depth discussion, so as to allow the reader to follow the decision trail and subsequently judge the rigour of the study's findings. **Chapter Four** presents the methods employed for Stage Two of the study. This includes the rationale for seeking a degree of verification of the emergent grounded theory from Stage One of the study, through the on-line focus group method. The ethics of the study are discussed in **Chapter Five**, including a discussion of the use of reflexivity for scrutinising the ethics of decisions made during the course of the study. **Chapter Six** presents the findings of the study, supported by raw data and identification of how literature contributed to conceptualisation in the emergent grounded theory. **Chapter Seven** presents a critical review of the literature on effort, including a meta-synthesis of occupational therapy literature. This chapter draws attention to gaps in the current body of knowledge on effort. **Chapter Eight** discusses the current study's findings in relation to the literature, identifying aspects of the emergent grounded theory that support existing theoretical discussions and research, as well as new theory generation. The contribution of the study to the Theory of Creative Ability is suggested. **Chapter Nine** presents the formal Theory of Effort for Relating, resulting from conceptual comparison of this study's findings with other theoretical works.

Using criteria for evaluating grounded theory research, **Chapter Ten** presents an evaluation of the current study, detailing the strategies employed to ensure rigour. **Chapter Eleven** sets out the contribution of the study with respect to existing knowledge of effort. This final chapter also includes a reflection on the research process, identifying its limitations and learning that I gained as a neophyte grounded theory researcher, before closing with recommendations and conclusions.

Within this thesis, I have adopted a first-person writing style, which I think is particularly important to Chapter Six (Findings) for conveying that I was actively interpreting the voices and actions of the research participants. The sample for this study, included people that were using healthcare services. With respect to this sample group, the term patient is used rather than client or service user, because patient was the term that they most commonly used in reference to themselves.

To aid ease of reading, throughout this thesis ‘his’ is used in a non-gender specific way, i.e., to denote both males and females.

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CHAPTER ONE

Background to the study

1.1 Introduction

This chapter sets out the background to the current study, beginning with an overview of occupational therapy, theory, and its importance in occupational therapy. This is followed by an outline of the Theory of Creative Ability and an explanation of the significance of the constructs of effort and maximum effort to its theoretical propositions. The Theory of Creative Ability is then critically evaluated; identifying that it lacks and requires clear definitions of effort and maximum effort. This leads to concluding the chapter with a statement of the problem, and the purpose and aims of this study.

1.2 Occupational therapy

Central to the philosophy of the occupational therapy profession, is the belief that the fulfilment of human beings' innate need to participate in, and perform activities, is essential to health and well-being (Hocking 2009; Law et al. 2002). Activity participation is the taking part, or involvement in an activity (Simpson & Weiner 2002; du Toit 1973). In the occupational therapy profession, this may also be referred to as occupational performance, meaning the actions of the person elicited by the activity (Creek 2002).

Occupational therapy aims to enable satisfying activity participation, using activity as intervention media (Law 2002; American Occupational Therapy Association 2004, 2008; Christiansen & Townsend 2010), to overcome physiological, psychological and sociological discomfort, and to maintain or enhance health and well-being (Wilcock 1998; Law et al. 2002). To this purpose, occupational therapy is a complex intervention (Creek 2003), requiring therapists to understand complex information about a person's motivation for, engagement in, and performance of activity (Parham 1987; Pelland 1987). To assist with this task, occupational therapists use a range of existing theories (Elliott et al. 2002). The occupational therapy profession is also concerned with the study of humans as occupational beings, in order to develop the knowledge base of the profession, known as occupational science (Yerxa et al. 1989). Although the term occupation may be commonly used by laypeople to denote work or employment, in the context of occupational

therapy occupations are defined as "everyday activities that people do as individuals, in families and with communities to occupy time and bring meaning and purpose to life" (World Federation of Occupational Therapists 2016).

1.3 Definition, structural components and value of theory

There is broad agreement in the literature that theory is an internally consistent set of interrelated assumptions, concepts, definitions and relational statements that present a systematic view of phenomena by specifying relationships among variables (Reed 1984; Littlejohn 2002; Walker & Avant 2011). The first structural component of theory is concepts, which are the mental conceptualisations of phenomena (Chinn & Kramer 2008; Creek 2008) that are observed, have experiential referents (DePoy & Gitlin 2005), and labelled by terms to communicate and share their meaning with others. Phenomena that are intangible ideas with referents that cannot be directly experienced but inferred, are called constructs (Shoemaker et al. 2004). An example of a construct is motivation: a person's motivation for activity participation is not something that an onlooker can experience through his/her senses. Rather, one can infer it from the behaviour of the person being observed e.g., degree of self-application to the activity (Ikiugu 2010). Theorists identify concepts and constructs by labelling them with words, and the set of terms used by the theorist becomes an integral element of the theory (Littlejohn 2002).

Concepts and/or constructs are the fundamental structural component and building blocks of theory (Creek 2008; Hinojosa et al. 2010; DePoy & Gitlin 2005; Johnson & Webber 2009; Shoemaker et al. 2004; McKenna & Cutcliffe 2005), the meaning of which must be clearly communicated by precise definitions (Chinn & Kramer 2008; Wacker 2008). Subsequently, definitions are the second structural component of theory (Chinn & Kramer 1999). Concepts, terms and definitions tell us what the theorist is looking at, and what is considered important (Littlejohn 2002). The relationships between concepts are known as postulates (Hinojosa et al. 2010).

The main function of theory is to explain and predict one phenomenon on the foundation of knowledge of another, making predictions of what will happen under certain conditions (Blegen & Tripp-Reimer 1997; Hinojosa et al. 2010). In a healthcare discipline such as occupational therapy, theories are guides for "interpreting, explaining, and understanding the complexity of human relationships" (Littlejohn 2002, p. 18). They help us clarify what is observed, enabling understanding of relationships and interpretation of events. Thus the usefulness of theories is that they describe, explain, predict, prescribe or control (Kaplan 1964; Walker & Avant 2011;

Prochaska et al. 2008). The adequacy of theory to perform these functions can be determined by evaluating it against criteria for evaluating theory, as utilised in section 1.6.2.

1.4 Types of theory relevant to occupational therapy

Theories range along a continuum of abstractness (Fig. 1-1). At the most abstract end of the continuum, grand theory explicates a worldview that is useful to a profession for understanding the profession's key concepts and principles (Walker & Avant 2011). The occupational therapy profession's grand theory is comprised of assumptions about the occupational nature of human beings, and the link between activity participation, health and well-being. Such grand theory is too abstract to be tested directly, or to be practically useful (Blegen & Tripp-Reimer 1997). Grand theory directs middle range theory, which is thought to be the most useful, because it describes a set of phenomena, explains under what circumstances phenomena occurs, and prescribes the ways in which phenomena might be affected by manipulation or change (Smiraglia 2001).

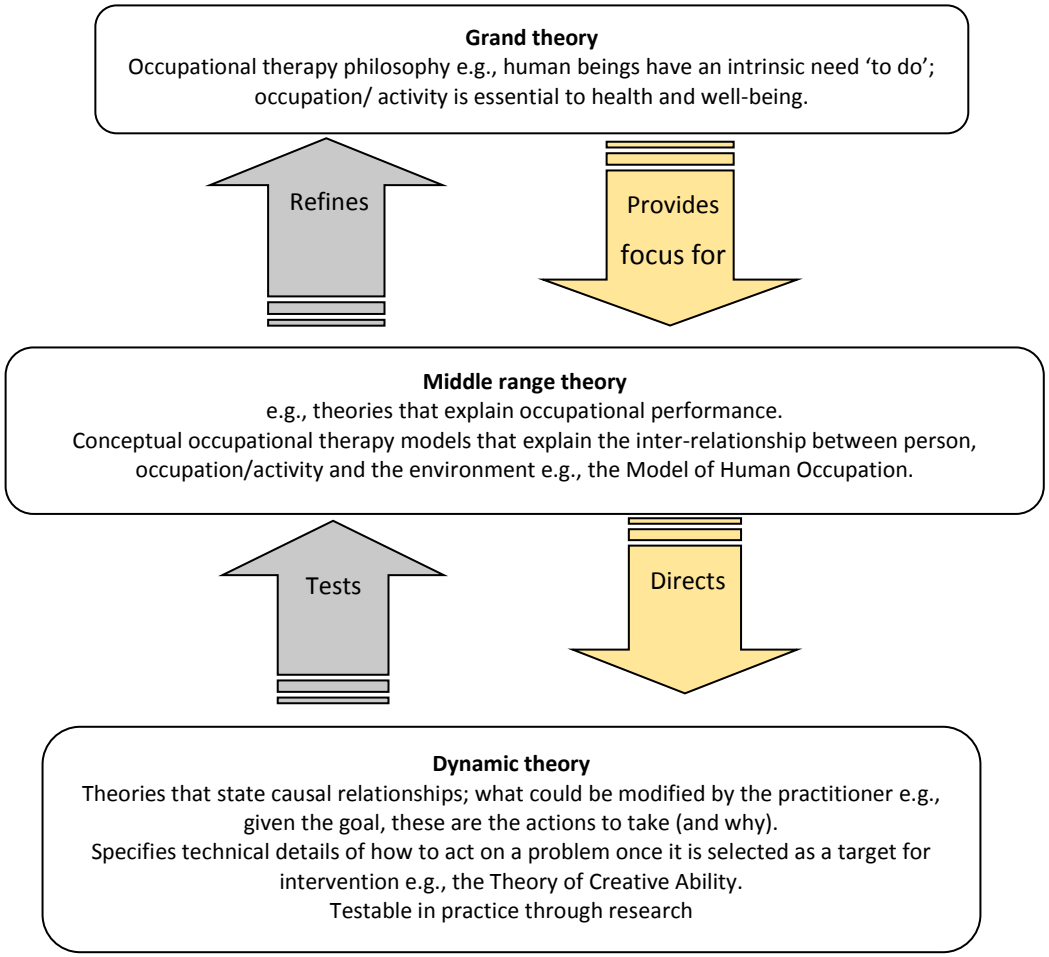


Figure 1-1 The relationship between grand, middle range and dynamic theory

In occupational therapy, middle range theories describe circumstances under which activity participation occurs, relationships between activity participation and health, and predict future activity participation (Ikiugu 2010). Hence, middle range theory is valued for uniting theory with practice (Cody 1999). Middle range theory is not fact or absolute truth, but is described by Merton (1967) as an orientation that involves the specification of ignorance. That is, work on middle range theories recognises that there is an absence of knowledge, and acknowledges that there is more to be learned (Blegen & Tripp-Reimer 1997). Similar to areas of ignorance for the nursing profession identified by Blegen and Tripp-Reimer (1997), occupational therapists will recognise areas of ignorance in relation to patient problems with occupational performance, likely outcomes without occupational therapy and the effects of occupational therapy. These are the phenomena attended to by middle range theory, the assumptions and hypotheses of which may be confirmed, or disconfirmed by empirical investigation (May et al. 2009). Therefore, middle range theory directs dynamic theory (also known as practice theory) that links theory to practice intervention (Miller 1993) (Fig. 1-1).

Dynamic theory is causal in nature, in that it provides theoretical information on how change will occur and specifies the technical details required for therapists to act on the problem to promote change (Walker & Avant 2005; Hinojosa et al. 2010). Dynamic theory is also labelled by Dickoff and James (1968) as situation-producing theory or predictive theory. A problem that occupational therapists commonly seek to address, is improving a person's functional ability for activity participation. Therefore, therapists need dynamic theory to explain and predict how change in ability will occur (Miller 1993; Hinojosa et al. 2010). When dynamic theory is tested, it is essentially testing middle range theory, which in turn refines grand theory (Fig. 1-1).

1.5 The value of theory to the occupational therapy profession

In occupational therapy, occupation-focussed models articulate the theories of the profession (Law & McColl 2010), explaining concepts and factors that influence activity participation (Towns & Ashby 2014). The use of such theories is important for enabling occupational therapists to provide professional, clinically reasoned rationales for intervention that may influence activity participation (Boyt Schell & Schell 2008; Reed 1998; Herman 1992; Elliott et al. 2002). Thus, the explanatory and predictive capability of theory makes understanding and using theory an essential competency of professional practice (Green & Acheson Cooper 2000; Boniface & Seymour 2012). Linked to theory informed intervention, the overriding purpose of theory for a practice discipline such as occupational therapy is to predict the outcomes of intervention (Blegen & Tripp-Reimer

1997; Creek 2010). Mitcham (2003) asserts that in evidence-based healthcare, it has become increasingly critical to use theory to underpin practice.

Using theory in practice is not without its challenges. Some occupational therapists do not use, or are reluctant to use theory (Elliot et al. 2002; Forsyth et al. 2005), or express disillusionment with theory (Higgs & Titchen 2001). Reasons stated include perceptions that theory is difficult to relate to, or embed in practice (McCluskey 2003; McCluskey & Cusick 2002; Boniface et al. 2008); is irrelevant for guiding assessment and intervention (Forsyth et al. 2005), or that theory is not a useful tool to guide decision-making (O'Neal et al. 2007). Some therapists value technical skills over theoretical principles to guide practice (Ikiugu 2012), but this viewpoint is concerning. The occupational therapy profession has evolved out of theory regarding the occupational nature of human beings, and activity participation linked to function, motivation and the environment (Miller 1993). Dr Meyer, a leading psychiatrist in the United States who became one of the founders of occupational therapy in the early 1900s, systematically observed the curative potential of activity (Christiansen 2007), asserting the theory that the health of an individual is best understood in terms of activity participation (Meyer 1943). Ultimately, the occupational therapy profession is founded upon, and has continued to develop theories of the relations between an individual's function, activity and the environment, allowing occupational therapists to explain and predict behaviour (Miller 1993). If not using theory, a therapist's concentration on individual techniques can detract from, and neglect these underlying relations (Miller 1993), which is inconsistent with professional practice (Sibeon 1991; Miller 1993; Curry & Wergin 1993; Boniface & Seymour 2012; O'Neal et al. 2007).

It is the use of theory that essentially differentiates professionals from technicians (Sibeon 1991; Miller 1993; Curry & Wergin 1993; Boniface & Seymour 2012; O'Neal et al. 2007). Whilst there are reports of therapists' resistance to theory use, there is much evidence that theory is used to provide structure to clinical reasoning and to assist with profession specific, science-based occupational therapy (Owen et al. 2014). In their selection of theory, therapists should be cautious of accepting a theory at face value for several reasons. Therapists should understand that the theory-in-use, is highly likely to be incomplete. It can be argued that a theory is never complete, because the theorist's current knowledge, whether it has developed out of ideas from research or not, is always subject to modification, particularly after it has been tested (Littlejohn 2002). Revision and modification of a theory is part of the usual course of developing a theory. According to Lewin (1947), theory goes through three stages of development: 1) a speculative period in which theory is put forward to attempt to explain phenomena based on observation and

experience; 2) the descriptive period when facts are gathered to describe "what is really happening" (Reed 1984, p. 5), and to test the theory. From this stage, any anomalies may lead to 3) the constructive period when theories are revised and new ones developed grounded in facts rather than speculation. Potentially, this can result in an improved theory (Christiansen et al. 2001). Therefore, if therapists think critically about their application of theory, and test theoretical ideas through research or practice, this can lead to extension, revision, modification or validation of theory (Walker & Avant 2011). This process has the potential to improve occupational therapy practice (Storch & Eskow 1996; Hocking & Whiteford 1997; Parham 1998; Finlay 2001; Boniface & Seymour 2012).

Therapists should also think critically about theory because it may be incomplete due to lacking essential components or qualities of a theory. The occupational therapy profession as a self-portrayed scientific discipline (Townsend & Polatajko 2007), should assure that it is ready to question claims or assumptions regarding the *rightness* of any specific theory or intervention (Brechin & Sidell 2000). It may feel threatening to risk discovering that a theory in use is inadequate in some respect, but a focus on best practice for patients and continuing professional development, should motivate therapists to examine the theories that inform their practice decisions (Miller 1993).
An occupational therapy theory that is valued in practice, but requires further theory development, is the Theory of Creative Ability (du Toit 1973, 1974a).

1.6 The Theory of Creative Ability: an overview

The Theory of Creative Ability was developed in the 1960s-1970s by South African occupational therapist, Vona du Toit. The phenomena that it seeks to explain is how human beings develop skills and motivation for activity participation i.e., creative ability. Du Toit's use of the term creative reflects Buber's (1947) philosophical notion of bringing into existence something that did not exist before, to the person creating it. What is created may be external to oneself and tangible such as creating a new garden, or internal and intangible such as developing new knowledge (Sherwood 2015). Du Toit theorises that the greatest degree of creativity or change occurs through acting with maximum effort, described as "to in span all his resources – to try his hardest" (du Toit 1974b, p. 44). This creativity or creative ability is evidenced in a person's current ability 'to do' in the environment, as a total of a person's functional ability for action as directed by motivation (du Toit 1963).

In the usual course of development, it is suggested that a person's creative ability develops progressively during the lifespan, described in nine developmental stages known as levels of creative ability. As a consequence of illness, disability, trauma, environmental influences or other factors influencing activity participation, a person can regress to a lower level of ability. The task of the occupational therapist is to identify the person's level of ability by evaluating components of creative ability (functional ability and motivation), identified from research on the activity participation of adults with spinal injuries, adults with chronic mental illness, emotionally disturbed children, autistic children, and children with cerebral palsy (du Toit 1970), although not published. According to du Toit (1974c), the components are:

- The quality of the tangible or intangible products
- The quality of ability to relate to materials, objects people and situations
- The [person's] ability to control the negative effects of anxiety
- Degree of initiative or originality
- The [person's] ability to make maximum effort to meet demands, challenges and tasks set to him.

The Theory of Creative Ability provides detailed description of the levels of creative ability to guide assessment for identifying a person's level. For each level, general aims for growth or change in ability are stated, supported by an intervention guide that states the technicalities of therapeutic intervention for facilitating change. To enable therapists to know when aimed-for changes have been realised, description of predicted changes in functional ability and motivation are provided. Therefore, as a theory that specifies what may be changed, guides intervention to bring about change and predicts change, it is a dynamic theory. Creek (2010) refers to the Theory of Creative Ability using Dickoff and James' (1968) alternative term for dynamic theory: situation-producing theory, or predictive theory.

In the occupational therapy profession, theories began to be interpreted into models during the 1970s-1980s (Cole & Tufano 2008). Models are the general principles of a theory, structured to make theory readily applicable by practitioners (Boniface & Seymour 2012). During this era, the Theory of Creative Ability became known as the Model of Creative Ability, published and revised within an occupational therapy text by de Witt (1989, 1992, 1997, 2005, 2014), and renamed the Vona du Toit Model of Creative Ability (VdTMoCA) in 2010 (Sherwood 2015). The model is purported to be widely used by occupational therapists in South Africa (van der Reyden 1989; de Witt 2003, 2005; Jansen & Casteleijn 2009; Casteleijn & Graham 2012; Casteleijn 2014), and is also in use in the UK and Japan (Walters et al. 2014; Sherwood 2015). The model is purported to provide precise and practical guidelines for assessment, making it possible to effectively assess

clients with a wide range of mental health diagnoses and severity of illness (de Witt 2005), and particularly proves its value when working with clients on lower levels, as it can be used with clients that present erratic and unpredictable behaviour (Casteleijn & de Vos 2007). Despite many anecdotal reports that support these claims, research into effectiveness is yet to be forthcoming.

A quantitative study using measurement principles by Casteleijn (2014) confirmed that the first six levels of creative (as those most commonly seen in occupational therapy practice), do indeed exist. This finding can enhance therapists' confidence in the three tools used to measure creative ability i.e., the Creative Participation Assessment (van der Reyden 2005, 2014), the Functional Levels Outcome Measure (Casteleijn et al. 2013) and the Activity Participation Outcome Measure (Casteleijn 2010). However, as will be argued in the following critical evaluation of the Theory of Creative Ability, clinicians' confidence in the theory and its measures is undermined by its lack of definition of effort and inadequate definition of maximum effort.

The focus of this thesis is theory development as a contribution to the Theory of Creative Ability, which underpins the Vona du Toit Model of Creative Ability as a guide for practice. Thus, this thesis refers to the Theory of Creative Ability rather than the model.

1.6.1 Theory of Creative Ability: the significance of effort and maximum effort

Du Toit (1970, 1974a) stated that a person's creative ability is manifested in his creative response (attitude that leads to a decision to participate), creative participation (doing) and creative act (the resulting tangible or intangible product as a result of effort). Figure 1-2 presents the definitions of these concepts and illustrates their relationships.

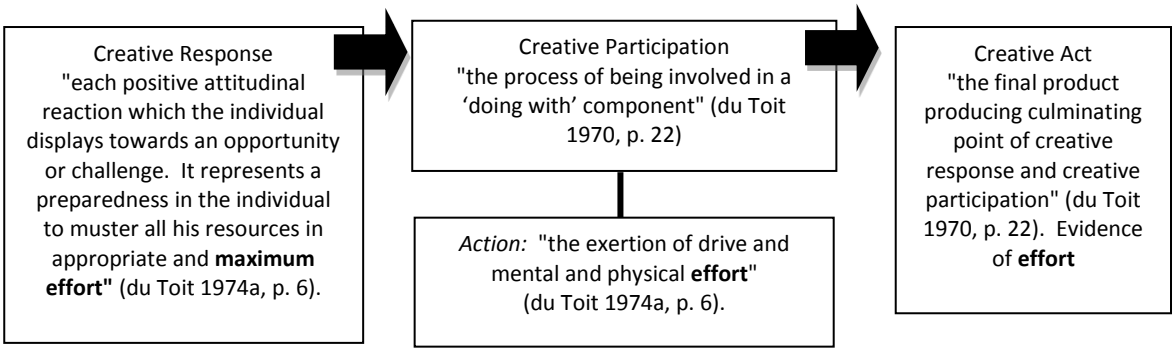


Figure 1-2 Creative response, creative participation, creative act and their relationships

The construct of effort is related to each core concept/construct: creative response is the preparedness to exert effort in order to participate in the world (creative participation) through action (effort), in order to create something as a result of effort (creative act). Therefore, an

apparent assumption within the theory is that effort is critically important to the conditions for, process of, and the result of activity participation. What is more, the construct of maximum effort, defined as "to in span all his resources – to try his hardest" (du Toit 1974b, p. 44), is postulated as the causal mechanism of change in a person's level of creative ability. Causal statements indicate that one concept is considered to cause the occurrence of a second concept (Walker & Avant 2005). As the third structural component of theory, statements of postulates are necessary for addressing the problem of concern. In the Theory of Creative Ability the problem it addresses is how to bring about growth or recovery of a person's activity participation i.e., creative ability. The causal mechanism for change in ability is identified as maximum effort: "it is only maximum effort that will result in increasing creative ability" (du Toit 1974b, p. 45).

Although it is stated that maximum effort is essential for change in creative ability, no further explanation or description of maximum effort is provided beyond its limited definition. The lack of a definition of effort, and the inadequacy of the maximum effort definition, particularly in the absence of explanation of these constructs, has important consequences for the Theory of Creative Ability in terms of meeting the criteria for theory. This chapter continues with an exploration of this issue, through critically evaluating the Theory of Creative Ability.

1.6.2 A critical evaluation of the Theory of Creative Ability

In order to critically evaluate the Theory of Creative Ability, suitable criteria for evaluating theory were sort in the literature. A range of criteria was identified, examples of which are summarised in Table 1-1. Although not recent, Reynold's (1971) widely accepted universal criteria for evaluating theory guided the following critical evaluation, supported by reading other criteria e.g., Hardy (1974); Fawcett (2005b); criteria for middle-range theory (Whall 2005), and lists of virtues of good theory e.g., Quine and Ullian (1978) and Wacker (2008). The criteria against which the Theory of Creative Ability is evaluated as being inadequate are: intersubjectivity, sense of understanding, soundness of reasoning and measurement.

Intersubjectivity is agreement among relevant individuals about the meaning of a concept, expressed as a specific term (Reynolds 1971). The degree of intersubjectivity that can be achieved is influenced by how clearly the meaning of a concept is communicated through the definition of the term used to express the concept. Terms have to be defined in order to convey how a concept is being used within a given context (Chinn & Kramer 2008), and ideally definitions are stated with such clarity that anyone can categorise phenomena in a way similar to the person who originally defined it (Reynolds 1971). Definitions are therefore essential to shared understanding of

concepts, making their development the most critical task for theorists (Reynolds 1971). Without a definition of effort, intersubjectivity about its meaning cannot be achieved.

Table 1-1 Comparison of criteria for evaluating theory.

Reynolds (1971)	Hardy (1974)	Fawcett (2005b)	Whall (2005)
Intersubjectivity Is there shared agreement among relevant individuals with respect to 1) the events or phenomena encompassed by a concept, and 2) the relationship between concepts?	***Intersubjectivity*** of meaning Are concepts given a meaning similar to the meaning used by other scientists in related areas?	***Significance*** Are the concepts, propositions and philosophical claims explicit?	***Basic consideration:*** definitions and theoretical statements, and their relative importance.
Sense of understanding Is there full description of the causal mechanisms that link changes in one or more concepts (independent variables) with changes in other concepts (dependent variables)?	**Soundness of reasoning** Does a claim undeniably follow from the given premises? ***Ability to control*** and manipulate the phenomenon	***Internal consistency*** Are the context (philosophical claims and conceptual model) and the content (concepts and propositions) of the theory congruent? Do the concepts reflect semantic clarity and semantic consistency? Do the propositions reflect structural consistency?	***Internal evaluation:*** assumptions; concepts; internal consistency and congruency; empirical adequacy
Abstractness To what degree are the concepts independent of a specific time or place?	***Degree of accuracy*** with which predictions can be made	***Parsimony*** Is the theory content stated clearly and concisely?	
	Generality The degree of abstractness which characterises the theory	***Testability*** Are the concepts observable through instruments that are appropriate empirical indicators of those concepts? Empirical adequacy Are theoretical assertions congruent with empirical evidence? Pragmatic adequacy Are education and special skill training required before application of the theory in practice? Has the theory been applied in the real world of practice?	
	Testability The relationship between the concepts and the empirical referent		
	Contribution to understanding Does the theory describe the phenomena and give a sense of insight?		
	Empirical support for the hypotheses		

With regards to maximum effort, this is defined as "to in span all his resources – to try his hardest" (du Toit 1974b, p. 44). This is a brief definition that lacks detail and specificity. Subsequently, this is not what Wacker (2008) refers to as a good definition, because it is not a clear expression of the concept.

Intersubjectivity of effort and maximum effort cannot be achieved; therefore these constructs cannot be reliably shared and communicated from one generation of therapists to the next. This is evidenced by the extent of disagreement between therapists and subsequent debate that arises

when the meanings of effort and maximum effort are discussed during training that I have provided in the Theory of Creative Ability. Undefined or vaguely defined constructs lead to ambiguity, because they will be attributed different meanings by different people (Denzin 1970; Blumer 1969). This challenges any assumption that there is a common shared meaning of effort simply because it is a term of everyday language. Concepts are socially constructed, culturally and contextually bound, and change over time, therefore one cannot assume shared meaning (Rodgers & Knafl 1993). Shared meaning within a profession's body of knowledge cannot be assumed, as terms in theories have different meanings for different theorists (Hagedorn 1992). In relation to effort, this is not a construct that is commonly discussed, or defined in the occupational therapy literature. Even if it was, any definitions would be irrelevant to the Theory of Creative Ability, as concepts/ constructs must be defined within a theory (Wacker 2008), and the meanings of definitions can only be understood within the framework of the theory to which they belong (Hardy 1974).

The lack of intersubjectivity regarding effort and maximum effort has an impact on the criterion: sense of understanding. This is dependent upon the full description of the causal mechanisms that link changes in a concept(s)/ constructs with changes in others (Hardy 1974). In the Theory of Creative Ability, the causal mechanism for change is maximum effort, stated in the postulate: "it is only maximum effort that will result in increasing creative ability" (du Toit 1974b, p. 45). This causal statement should fulfil part of the purpose of theory i.e., to predict and control phenomena (Hardy 1974). However the causal statement fails in this respect, because maximum effort cannot be precisely understood. Achieving understanding of a construct is a prerequisite to postulating its relationship to other constructs (Wacker 2008).

Sense of understanding is also related to the criterion soundness of reasoning, which is established by assessing the logical structure of the relation between the concepts/ constructs of the theory (the syntax) and the meaning given to them (Hardy 1974). The meaning attributed to constructs must be clear and explicit, in order to examine the syntax (occurrence of constructs in postulates), and determine if the structure of the theory is logical (Hardy 1974). As there is no intersubjectivity or sense of understanding, the logical rigour of the postulate "it is only through maximum effort that there is change", cannot be established.

The final criteria used in this critical evaluation are measurement and testability**.** Definitions are necessary for identifying the concept's variables, or in the case of constructs, inferences as indicators (Hardy 1974), for measurement purposes. If there is no definition of effort, it cannot be measured. For measurement purposes, the quality of a concept/ construct's measure is directly

related to the quality of its formal conceptual definition (Wacker 2008). Thus, with regards to maximum effort, the definition is inadequate because it lacks precise detail of observable inferences (properties) that might represent it. This will potentially make measuring it impossible. The ultimate consequence of not being able to measure either of these constructs is that they cannot be accepted as scientific knowledge (Reynolds 1971), and the Theory of Creative Ability cannot be tested. Testability is commonly regarded as the chief characteristic of a theory that is scientifically useful (Fawcett 2005a). Marx and Cronan-Hillix (1987) asserted that a theory that one cannot test, is not a scientific theory. Marx (1976) declared such theory to be "scientifically worthless, no matter how plausible, imaginative or innovative it may be" (p. 249).

1.7 Understanding of effort within the occupational therapy profession: identifying a gap in knowledge

Prior to starting the current study, I undertook several searches of the occupational therapy literature to identify whether effort and maximum effort in relation to activity participation are clearly defined and explained. I briefly read through the limited literature that was found, reading just enough to establish that effort and maximum effort are poorly understood constructs in the occupational therapy profession, indicating a gap in knowledge that warrants investigation through research. Limiting reading of the literature is recommended in grounded theory research in order to avoid received theory (Glaser & Strauss 1967; Glaser 1978), i.e., theory arising from the literature, which can contaminate the researcher's thinking, or impede the discovery of theory in the data (Glaser 1992). The literature review should be limited to identifying that there is a gap in knowledge, indicating that a topic needs further development (Glaser & Strauss 1967; Corbin & Strauss 2015), and not fully undertaken until data analysis has been completed (Glaser 1992).

In the current study, having completed the data analysis and written-up the emergent grounded theory of effort, I undertook a meta-synthesis of occupational therapy literature. This formed part of the literature review for the purpose of identifying how effort in relation to activity participation, is understood by occupational therapists. The review identified that although mentioned in some literature, effort is neither defined nor explained. In the vast majority of the literature effort is either not mentioned, or is only vaguely inferred. The exception is literature on malingering, which refers to sincerity of effort, or sub-maximal effort (e.g., Brink 2007; Baptiste et al. 2005), although these terms are rarely defined. The findings of the meta-synthesis are discussed in the literature review (Chapter Seven).

1.8 Statement of the research problem

The lack of a definition of effort and the inadequacy of the definition of maximum effort within the Theory of Creative Ability, renders the Theory of Creative Ability incomplete. The nature and relation of effort and maximum effort to activity participation is unclear, which compounded by their lack of definition in the occupational therapy literature, has several far reaching implications:

1) There can be no shared understanding between occupational therapists about the meaning of these constructs, but ambiguity. This is likely to result in confusion and unreliable use of theory (Wacker 2008).

2) Without an understanding of maximum effort, the logical rigour of the causal statement that maximum effort leads to change, cannot be established. Therefore, the scientific community cannot agree on the usefulness of this statement for predicting or explaining phenomena, and it cannot be recognised as part of a body of knowledge (Hardy 1974).

3) Without definitions, effort and maximum effort cannot be measured or tested, making it impossible for them to be useful to a scientific discipline (Hardy 1974).

1.8.1 Purpose of the study

The purpose of the current study was to discover effort and maximum effort and their relations to activity participation. A theory of effort ought to provide definitions of effort and maximum effort and state propositions of how, why and under what conditions they have significance to activity participation.

The potential impact of this study is:

1) The establishment of definitions of effort and maximum effort, in order to satisfy the first structural component of theory.

2) The contribution of definitions to the Theory of Creative Ability to enhance the validity and operational adequacy of the Theory of Creative Ability.

3) Discovering and defining effort and maximum effort in relation to activity participation will enhance the occupational therapy profession's understanding of the conditions for activity participation.

1.8.2 Research question, aims and objectives

To address the research question and achieve the objectives of the study, the study was undertaken in three sequential stages.

Stage One

Research question: What is the theory that explains effort and maximum effort in relation to activity participation?

Aim: To formulate a theory of the relation of effort and maximum effort to the conditions for, process, and results of activity participation.

Objectives:

- Describe and explain what constitutes effort and maximum effort for and/or during activity participation.
- Describe and explain the conditions under which effort and maximum effort occurs.
- Describe and explain how the environment influences effort and maximum effort for activity participation.
- Describe and explain action strategies that describe effort and maximum effort.
- Describe and explain interactional strategies that describe effort and maximum effort.
- Describe and explain the consequences of effort and maximum effort in activity participation for the individual.
- Describe and explain the process of effort and maximum effort.

Stage Two

*Research question***:** Is the theoretical construction of effort and maximum effort plausible?

Aim: To evaluate the emergent theory of effort and maximum effort.

Objective: To establish the degree to which the theoretical formulation of effort and maximum effort fits reality and provides understanding.

Stage Three

Research question: What is the contribution of the theory of effort and maximum effort to the Theory of Creative Ability?

Aim: To identify the compatibility of the emergent theoretical construction of effort and maximum effort with the Theory of Creative Ability.

Objective: Identify aspects of the theoretical construction of effort and maximum effort that are compatible with, contradict, or have potential to add to their meaning in the Theory of Creative Ability.

An overview of the entire study is provided in Figure 3-1 in Chapter Three (Stage One Methods).

1.9 Conclusion

This chapter has explained the background to the research problem, and the need for the current study on effort and maximum effort. A brief outline of the current study's stages and how the research questions were addressed has been provided. The outline of the thesis has been set out in the Preface.

CHAPTER TWO

Philosophical and methodological framework

2.1 Introduction

This chapter presents discussion and justification of the methodology and approaches used to address the research questions and aims. First, the rationale for the selection of the qualitative research paradigm for this study is presented. This is followed by an examination of ontological views of concepts in acknowledgment of the fact that an important component of developing a theory of effort, is to define and explain the constructs effort and maximum effort. There then follows a justification of the selection of Grounded Theory Methodology for this study. The key tenets of grounded theory are described, followed by discussion of debates on grounded theory. This leads to a justification for selecting the classic grounded theory approach for this study. The difference between substantive and formal grounded theory is then explained, leading to an explanation of the need to undertake both substantive and formal theory development to meet the aims of the current study. There then follows a detailed exploration of what constitutes formal theory, based around the historical lack of clarity regarding generality. Finally, the various approaches to formal theory generation are discussed, leading to identification of the approach developed for the current study.

2.2 Selection of the qualitative research paradigm

For the purpose of theory development there are two research paradigms: quantitative and qualitative. The contribution of the quantitative paradigm to theory tends to be more generalisable than qualitative research (Gay & Weaver 2011), because of its generation of data that is hard, rigorous and reliable. This allows investigations into cause-effect relationships, measurement, explanation and hypotheses testing of concepts that have been defined prior to commencement of a study, and which remain constant throughout it (Leedy & Ormrod 2010). The contribution of quantitative research is therefore, theory testing and working within theory rather than extending it (Blalock 1991). This does not have relevance to the current study because there is neither theory of effort for activity participation to test, measure or explain, nor are there defined concepts to measure. Quantitative research is not suitable in these circumstances (Smith & Biley 1997).

The contribution of qualitative research to theory is in exploration of topics that are difficult to quantify, require making sense of complex social situations to explain how participants make sense of their situation, or when answering the question *what is going on here?* (Gay & Weaver 2011). These foci are relevant to this study, which seeks to develop theory about the rich and diverse worlds of people undertaking activity and the complexity of that undertaking in terms of effort. The complexities of life experienced by participants in research, is something which quantitative research fails to address, as it does not always easily answer complex questions about the nature of the human condition (Finlay 1998; Cook 2001; Brink 2007). Rather, qualitative research is best suited for gaining insight into people's motivations, thoughts, actions and the meanings they attach to their world and experiences (Robson 2002). To this end, qualitative research is most suitable for areas for about which little is known, including areas requiring concept and theory development (Alvesson & Karreman 2011), as is the concern of this study. Therefore, the qualitative research paradigm was chosen for this study.

The decision to select a particular research approach over any other is a rational process guided by the current study's focus on finding out what effort and maximum effort are, in relation to activity participation. This indicates a concern for concept clarification, or development as part of theory building. This chapter continues by progressing philosophical considerations towards discussion of ontological and epistemological views of concepts and concept development.

2.3 The ontology of concepts

Concepts have long been at the centre of various ontological and epistemological debates regarding the nature of knowledge (Rodgers 1989; Rodgers & Knafl 1993). Therefore, consideration of the philosophical foundations of approaches for identifying, clarifying or developing concepts as part of theory building is crucial to the current study.

Debates regarding the nature of concepts and their role in the development of knowledge have resulted in the prominence of two main philosophical schools of thought: an entity theory, and an evolutionary theory of concepts (Rodgers & Knafl 1993). An entity theory of concepts developed out of the work of philosophers such as Locke (1975), Aristotle (1908) and Frege (1970) (Rodgers 1989). Entity theorists view concepts as specific entities with sharply defined boundaries and inherent truth value that corresponds to actual elements of reality, making it is possible to determine definitively whether a particular instance exemplifies a specific concept (Rodgers 1989). The implication is a single example of a concept is no better than another, but what is important is that the core essential attributes are found in all of the examples (Rodgers & Knafl 1993). The rigidity of the entity view is philosophically problematic for several reasons. Firstly, it is debatable

whether there can be subdivisions of reality so that reliable distinctions could be a reasonable expectation (Fehr 1988). Furthermore, in focusing on the concept as an entity in itself, entity theorists remove the meaning of the concept from context, ignore the many individual conceptualisations of things, do not acknowledge that conceptual understandings change over time, and lack attention to the influence of culture and context in discussion of concepts (Rodgers & Knafl 1993). This view also fails to address the abstract nature of some concepts such as health, for which none of the innumerable conceptualisations of health that people may hold, necessarily correspond with any real object (Rodgers & Knafl 1993). This view also oversimplifies complex concepts (Morse 1995).

With respect to the current study, an entity theory view of concepts is also not suitable, as this is at odds with my own ontological stance. Research is steered by the influence of the researcher's beliefs about the world and how understanding it should arise through research (Denzin & Lincoln 2005). As an integral part of being an occupational therapist, I value dynamism and interrelationships within reality. I do not view people and the meanings that things hold for them in their daily lives, as static and detached from the social and cultural context. Therefore, in keeping with my ontological stance, is an evolutionary view of concept development, which considers the context in the method of concept development. This is aligned with dispositional theory within the evolutionary school of thought. Dispositional theory acknowledges that concepts are context bound, evolve over time, and hence are never fixed, truly knowable realities (Rodgers & Knafl 1993). This was the view emphasised by Toulmin (1972), who maintained that there are social influences on concepts, forcing a re-evaluation of the notion of rigid and unwavering boundaries for concepts (Rodgers & Knafl 1993).

In consideration of the fact that occupational therapy has developed its own specific understanding and use of concepts, the work of Toulmin (1972) takes on particular relevance in relation to the current study. As a major contributor to advancing understanding of concepts as evolutionary, Toulmin (1972) asserted that we obtain our grasp of language and conceptual thought during education and development, and that particular collections of concepts reflect life, thought and ways of expression in one's society. Toulmin identified that concepts can be the collective possession of a community of concept users (Rodgers & Knafl 1993). With specific reference to the community of intellectual disciplines, Toulmin suggested that communities are characterised by specific sets of knowledge and explanatory ideals held by a particular discipline, driven by a need to explain certain phenomena (Rodgers 2005). Therefore, concepts possess explanatory power demonstrated by their utility in characterising phenomena or situations of

interest in the discipline (Rodgers & Knafl 1993; Rodgers 2005). Problems are said to result when existing capabilities fall short of reaching the explanatory ideals of the discipline; conceptual problems accounting for the gap between current understanding and intellectual goals (Rodgers & Knafl 1993; Rodgers 2005). It can be argued that this is the case in terms of the concept of effort for occupational therapists using the Theory of Creative Ability, due to its lack of definitions. From an evolutionary perspective concepts are continually changed or refined, or new concepts are introduced to enhance the problem solving abilities of the discipline. Consequently, the development or clarification of concepts is viewed as occupying a critical role in solving some of the problems relevant to a specific branch of science, and an important component of scientific progress (Rodgers & Knafl 1993; Rodgers 2005).

A central feature of dispositional theory views is that the defining characteristics that comprise a concept are not considered to be essential, or necessary and sufficient, but regarded only as demonstrating some degree of association with the concept. Wittgenstein (1953) described this as the principle of family resemblances. From this perspective, the construct of health could reasonably be used to describe a number of diverse individuals, because they sufficiently characterise, and therefore resemble the concept of health. From this viewpoint, health is not determined by individuals' possession of a finite core of essential attributes (Rodgers & Knafl 1993). This is a probabilistic view, in that there is concern for the probability with which a characteristic or attribute is associated with a concept. This view allows for the typicality effect, whereby some instances are judged more typical of the concept than others (Rodgers & Knafl 1993). This view of concepts is suitable for the current study of effort and maximum effort, which, like health, are abstract concepts, therefore may not be identified by absolute characteristics.

Through exploration of concept development literature, I have identified that I possess an evolutionary theory view of concepts. In this respect, Creswell (2013) was correct to caution researchers to be cognisant of the worldview assumptions that they bring to a study. With this in mind, the next section sets out the rationale for selecting Grounded Theory Methodology as the framework for the current study.

2.4 Grounded Theory Methodology

From the qualitative paradigm, there are a number of approaches for researchers (Creswell 2013), the most suitable to consider for the current study being phenomenology, ethnography and grounded theory. An examination of the study's focus, allows a rationale to emerge for selection of Grounded Theory Methodology.

The focus of the current study is to identify and describe effort and maximum effort, and explain their relation to activity participation as a theory of effort for activity participation. This requires discovery of the meaning of the concepts effort and maximum effort and explaining the relationship between these and activity participation. This is the task of theory development. I agree with Kaplan (1979), that "proper concepts are needed to formulate a good theory, but we need a good theory to arrive at the proper concepts…. the better our concepts, the better the theory we can formulate with them and in turn the better the concepts available for the next, improved theory" (p. 54). That is, concepts are best developed through theory development.

Theory development is not the concern of phenomenological research, which seeks to gain insight into the lived experience of the phenomena under study and accurately describe it (Wertz et al. 2011). Findings of a phenomenological approach would produce data that describes the experience of effort and maximum effort in relation to activity participation. Although meaning of effort and maximum effort is sought in this study as part of identifying and explaining these concepts, their pure description is not sufficient for developing a theory. Therefore, a phenomenological approach is not suited to this study.

Ethnographic research seeks to interpret and explain how a specific social and cultural group of people experience and make sense of their lives (Robson 2011). Using this approach, effort and maximum effort in relation to activity participation could be described in terms of their meaning and influence on activity participation within a discrete group or people or organisation. These findings would be insufficient for this study, because of limiting an understanding of the constructs to a discrete group without methodology for extending that understanding into generalisable theory.

As is evident in the phenomenology and ethnography approaches, the generation and analysis of qualitative data explicitly sets out to describe experience and meaning (Urquhart et al. 2009). A key feature of Grounded Theory Methodology, setting it apart from other qualitative approaches, is that grounded theory in addition to providing meaning, understanding and description of the phenomenon under study, moves onto the generation of theory (Glaser 1978; Urquhart et al. 2009). Grounded theory offers a systematic way to attend to qualitative data in order to develop theory about observed phenomena (Glaser & Strauss, 1967; Turner 1983). Hence, Grounded Theory Methodology provides a total methodological package that provides a series of systematic, exact methods that start with collecting data, continue into the writing-up process, and take the researcher to a publishable theory (Glaser 1998).

Grounded theory is oriented toward research questions regarding action and social processes (Corbin & Strauss 1990). Rooted in symbolic interactionism, grounded theory is concerned with discovering the nature of the objects, gestures and words in participants' worlds; how they define events and how they act in relation to their beliefs to resolve a concern (Corbin & Strauss 1990). The concern is "the general goal that motivates participation, or structures to keep working" (Glaser 2007, p. 103). This is most relevant to the current study, which is focussed on discovering effort in relation to the innate need, or motivation for activity participation, arguably the central concern of human beings, and which requires the use of self in relation to objects and others.

Symbolic interactionism is founded on the concepts of human society, social interaction, objects, the actor (self), action and the interconnection between actions (Blumer 1969). Blumer contends that the premises of symbolic interactionism that connect these concepts, are embedded in Mead's (1934) tenets of 'I', 'Me' and 'self' and the inner conversations continually occurring between them in the context of social interaction. As a major influence on the development of Grounded Theory Methodology, Mead (1934) suggested that the self needs to be appreciated as being situated in interaction with the social world. The person and the world cannot be understood in isolation, because the self is being continually developed through interaction with other human beings. In other words, the self is a product of social interaction, developed and refined through an on-going process of participation in society. In brief, human beings have a self that enables them to think in the form of internal conversation, leading them to act in relation to others as well as toward themselves (Mead 1934). This dynamic of the self in relation to one's world is of significance to the current study, because activity participation is understood by the occupational therapy profession to be a dynamic process in the interplay of self, activity and the environment (Baum et al. 2015). Furthermore, this dynamic is also stated within du Toit's (1974a, 1974b) Theory of Creative Ability. That is, activity participation is understood to be a motivated intersection of the person (self) with objects and people in situations (Creek 2003; du Toit 1974a, 1974b). In the current study, symbolic interactionism may, therefore, assist in discovering how people's interpretations of themselves and the world around them, influences a person's decision to exert, sustain and/or cease effort and maximum effort.

In exploring the process of resolving the concern for activity participation, this study seeks to discover effort and maximum effort from the experiences and behaviours of a broad range of people in a broad range of social contexts and situations. In this respect, Grounded Theory Methodology is recognised in the occupational therapy profession for offering a systematic

approach to studying the richness and diversity of human experience in order to generate theory related to activity participation (Stanley & Cheek 2003).

In grounded theory research, through induction the researcher moves from identifying the specifics of people's interactions and behaviours in the process of resolving a concern, to discovering patterns across a large number of incidents or groups (Glaser 2002). The patterns lead to identifying and generating concepts, and explaining their relationships in order to form the basis of a conceptual theory (Glaser 2004; Brink 2007). Grounded theory is, therefore, fitting for this study because it will allow me to move beyond providing understanding, meaning and description of effort and maximum effort to explaining how they relate to activity participation in the form of a theory. In this respect, grounded theory is widely recognised as a suitable methodology to use when there is a lack of knowledge or theory of a topic (Glaser & Strauss 1967; Schreiber & Stern 2001). Grounded Theory Methodology is also suitable for expanding and/or modifying existing theory (Robson 2011; Bluff 2005), as per the study aim to make a contribution to the existing Theory of Creative Ability.

In summary, Grounded Theory Methodology is suitable for this study because it fits the criteria arising from the research question. That is, it meets the need for: 1) an exploratory methodology which can develop understanding of the phenomenon of effort in relation to activity participation; 2) an inductive qualitative methodology to allow data to emerge from the participants rather than testing a hypothesis; 3) the generation of theory to either expand existing theoretical frameworks or enable the construction of new theories. Having selected the methodology for the current study, this chapter now sets out the key tenets of grounded theory, which will shape the study's research methods and processes.

2.4.1 Key tenets of Grounded Theory

Symbolic Interactionism views individuals as acting as a consequence of being in a particular situation, which warrants action. Therefore, Blumer (1969) advocated research that directly examines the individual's empirical social world and rejected working with preconceived concepts. This is consistent with a central tenet of grounded theory: that the theory should emerge from, and be grounded in the data; theory is discovered rather than forced by the imposition of the researcher's preconceived ideas (Glaser & Strauss 1967; Strauss & Corbin 1990).

Grounded Theory Methodology is an inductive approach for developing theory around complicated issues about people's lives, behaviours and emotions in contexts of varying

complexity (Strauss & Corbin 1998). This requires the researcher to interact with the people under study, directly gaining information on human behaviour and interaction in the natural situation, or context of interaction (Blumer 1969). Therefore, a tenet of grounded theory is that the researcher should undertake fieldwork to discover what is actually happening in the symbolic world of the participants (Strauss & Corbin 1998). Data collection in the natural field provides the researcher with the opportunity to understand experiences and behaviours of participants as they interpret them, discover their interpretation of self in interactions, and share their definitions of their worlds (Baker et al. 1992). This discovery motivates the researcher to raise questions about the phenomenon in the natural field, discover people's latent pattern of behaviour and conceptualise it (Glaser 1998), leading to a tentative hypothesis and finally, to developing theory (Glaser 1978).

A central tenet of grounded theory is that sample size and where to sample cannot be pre-determined, but theoretical sampling is guided by what emerges from the data (Glaser & Strauss 1967; Glaser 1978). That is, at the start of the study, the initial sample is not selected from the population based on certain variables or their representativeness, but is determined to examine the phenomena where it is theoretically thought to exist as a general subject area with a broad general knowledge of the topic (Smith & Biley 1997). As core variables are discovered, through an iterative process the researcher becomes aware that more information is needed to develop and saturate categories; therefore a strategic decision is made about where this information may best be found to meet analytical needs (Glaser 1978). Thus, sampling can be undertaken of a broad range of sources (Glaser & Strauss 1967), from people and incidents to locations, publications and poetry (Strauss 1987). The key to understanding this, is to appreciate that it is not a sample group *per se* that is of interest, but identifying patterns of behaviour for the generation of properties and hypotheses (Glaser 1978).

Theory is developed through a reciprocal relationship between concurrent data collection, coding and analysis (Glaser & Strauss 1967; Strauss & Corbin 1998). To discover the many variables and concepts that connect to each other to explain basic social processes or behaviour, requires grounded theory's series of strategies to identify codes, i.e., concepts that denote particular parts of the data (Wasserman et al. 2009). An essential distinguishing feature of grounded theory is its series of iterations referred to as a process of constant comparison, or constant comparative analysis, consisting of a moving back and forth among the data (Glaser & Strauss 1967). When coding an incident, the researcher compares a code in an incident with all previous incidents so coded, a process that begins to generate a category's theoretical properties (Glaser & Strauss 1967). Constant comparative analysis advances analysis from coding to the generation of

categories representing abstract phenomena (Chenitz & Swanson 1986). Through building higher levels of abstraction from the data, the researcher arrives at a core category, which explains the phenomena under study (Glaser & Strauss 1967; Annells 1997). Theoretical codes are used to conceptualise how the categories relate to each, forming hypotheses that become integrated into the theory (Glaser 1978).

During data collection, coding and analysis, the researcher's prior experience of the phenomena and/ or knowledge of the phenomena sensitise the researcher to relevant concepts (Glaser 1978; Charmaz 2006). This is known as developing theoretical sensitivity, which reflects the researcher's level of insight into themselves and the area of research (Strauss & Corbin 1998), and is an essential ability to possess for researchers' undertaking of theory integration and synthesis (Glaser 1978). The researcher keeps a trail of ideas about concepts, codes and their theoretical relationships by memo writing (Glaser 1998). This is a core strategy in Grounded Theory Methodology (Glaser, 1998) for theorising, creating an audit trail of the decision-making process (Birks & Mills 2015), and helping the researcher to determine what data are sampled next, using theoretical sampling (Glaser & Strauss 1967; Glaser 1978; Strauss 1994).

Data collection, constant comparative analysis and theoretical sampling proceed in a cyclical way with conceptualisation at its core (Glaser 1978). This enables the researcher to define ideas and analytic categories, which coalesce and become increasingly theoretical during successive levels of analysis (Charmaz 2006). That is, concepts are arranged into theoretical propositions and tentative hypotheses (Wasserman et al. 2009). When a substantive theory is sufficiently grounded and developed, the literature is reviewed to seek fit of the emerging theory with other theories in the substantive field (Glaser & Strauss 1967; Glaser 1978; Strauss & Corbin 1998). Therefore, the literature is used as data, undergoing constant comparative analysis with existing data, categories and conceptualisations (Speziale & Carpenter 2007). The role of literature reviewing is therefore different from that in other research approaches, because literature is viewed as data that contributes to the discovery of theory (Chenitz & Swanson 1986).

The result of the exact grounded theory procedures is an induced, conceptually dense grounded theory (Glaser & Strauss 1967; Strauss & Corbin 1994). Charmaz (2006, p. 4) describes the end product as "an abstract theoretical understanding of the studied experience". The resultant theory should fit the situation that was researched i.e., the categories should be readily applicable to and indicated by the data (Glaser & Strauss 1967). The theory should also work, meaning that it should be relevant to explain the behaviour studied (Glaser & Strauss 1967).

In summary, Grounded Theory Methodology is considered to be a rigorous research method with explicit, exact methods for the systematic generation of theory that has relevance to those involved with the phenomena (Glaser 1998). As such, Grounded Theory Methodology is pertinent to this study's purpose of discovering effort and maximum effort as grounded in participants' experiences and constructions of these constructs, and for developing a theory that has relevance to the occupational therapy profession as well as to ordinary people in relation to their activity participation.

2.4.2 Debates on Grounded Theory

The first stage of this study requires the development of a substantive grounded theory, which necessitates the selection of a grounded theory approach from several versions that are available. Grounded theory has undergone revisions and modification since *The Discovery of Grounded Theory* (Glaser & Strauss 1967) set out the original grounded theory methodological arguments and techniques for undertaking grounded theory research. This was followed by several publications to provide greater transparency of the approach i.e., *Theoretical Sensitivity* (Glaser 1978), *Qualitative Analysis for Social Scientists* (Strauss 1987) *and Basics of Grounded Theory Methods* (Strauss & Corbin 1990). The result is that within these publications, differing details and modifications of grounded theory have been presented, giving rise to many issues for debate.

Glaser (1978, 1992) has remained faithful to the original, classic grounded theory. Strauss and Corbin (1990) produced a reformulation of the classic mode, due to perceptions that the original version did not provide adequate guidelines and procedures for undertaking grounded theory research (Strauss & Corbin 1998). Strauss and Corbin's (1990) *Basics of qualitative research: grounded theory procedures and techniques,* was met with Glaser's (1992) publication of *Emergence vs. Forcing: Basics of Grounded Theory Analysis* as a correctional retort of Corbin and Strauss' modifications, which Glaser described as seeking full conceptual description rather than discovery of theory. Glaser subsequently produced a number of publications that he viewed as being in the spirit of the original grounded theory approach (e.g., Glaser 1998, 2001). There has since been an on-going debate in the grounded theory literature about the relative merits of each scholar's work (Boychuk-Duchscher & Morgan 2004; Heath & Cowley 2004). In addition, Charmaz (2000) presented a new method of undertaking grounded theory from a constructivist perspective, arguing that researchers and participants co-construct meaning. Charmaz's constructivist grounded theory was forcibly met with criticism from Glaser (2002), who argued that this approach forces the data.

The disagreements between Glaser, Strauss and Charmaz regarding what constitutes grounded theory, are well documented. Although it is not useful to set out all of the debates here, it is important to examine arguments that bear on my ontological and epistemological stance as a researcher, as this impacts on the coding and analysis of the data and the way in which grounded theory is used (Madill et al. 2000). Therefore, this chapter progresses with a consideration of complex ontological and epistemological debates arising in Charmaz's (2000, 2006) constructivist grounded theory vs. Glaser's more positivist stance, and the emergence vs. forcing debate. This is brought to a conclusion with my rationale for adopting Glaser's (1978, 1992) classic grounded theory as the methodological framework for this study.

2.4.3 Positivism and constructivism

Influenced by symbolic interactionism, grounded theory can be located within the postpositivist tradition. Positivist epistemology is based on the belief that the social world can be investigated objectively, in the same way as the natural world (Levers 2013). Positivists, with regard to study of society, hold that causal relationships can be found within human behaviour and that observations of this behaviour can be reported free from theoretical interpretation (Beckwith et al. 2008). Thus, positivists claim observations of behavioural patterns will lead, empirically, to the discovery of objective truths (Beckwith et al. 2008). This is consistent with the contention by Glaser (1998, p. 115) that the social world exists and the role of the researcher is to find out "what is going on" in a substantive area, hence the discovery of theory emerging from the data.

In contrast, constructivism is founded on an ontology of what exists depends on what individuals perceive to exist (Charmaz 2000, 2006), stemming from the pragmatic view of what can be known and evaluated. Pragmatism states that knowledge may not be known completely in an objective positivist way, because we cannot know beyond our experience, which limits our knowledge (Charmaz 2000, 2006; Mead 1934). From this perspective, constructivism denies that there is an objective reality, but that realities are social constructions (Guba & Lincoln 1989; Charmaz 2000, 2006). In this respect, the researcher cannot be separated from that which can be known in the construction of a particular reality (Charmaz 2000, 2006).

Charmaz (2000, 2006) published a constructivist version of grounded theory. Constructivists assume an epistemology that sees knowledge as created by the researcher during an on-going interaction with the researched (Guba & Lincoln 1994; Schwandt 1994). During interviews, the researcher and participant interact, resulting in understandings that are influenced by the context and mutually negotiated (Charmaz 2000, 2006; Hand 2003). That is, data and the analysis of data

are created from the relationship between the researcher and participants, through which they confer meaning on the data (Charmaz 2006). The researcher's interpretative understanding of how participants create their understanding and meaning of reality is the result of the analysis (Charmaz 2000, 2006). That is, the resultant theory is also an interpretation (Charmaz 2000, 2006); what is constructed is "an image of a reality, not the reality -that is, objective, true, and external" (Charmaz 2000, p. 523). However, Bryant (2009) argues that a move away from knowledge claims founded on true depictions of reality, can lead to any claim to knowledge being equally valid based on the principle that all forms of knowledge claim are germane, or have contextual legitimacy. Therefore, this is a knowledge claim that posits universal validity and hence constructivism may be a contradiction in terms. My view is that just because research involves a researcher, this does not necessarily mean that meanings are co-constructed, or that that the researcher cannot discover participants' meanings and a reality outside of him or herself.

Congruent with constructivism are my beliefs as an occupational therapist that multiple realities exist, dependent on the different perspectives of people influenced by context. This belief is not only pertinent to constructivism however, but is acknowledged in Glaser's classic grounded theory by focusing on problems that are of concern to, and defined by participants, not the researcher (Glaser 1998). Grounded theory research is concerned with problems that exist for people and acknowledges that people provide multiple perspectives of those problems, dealing with them by engaging in behavior that resolves those problems for them (Glaser 1978). However, while they may be aware of their own behavior in relation to how they resolve their main concerns, it is unlikely that they can see an overall pattern to that behavior, or are aware of how concepts are generated from large amounts of data (Glaser 2001). It is the role of the researcher to uncover and name the many latent patterns that participants may not understand from their accounts (Glaser 2002). To this purpose, researchers are neutral observers who discover data in an objective manner (Glaser 1992, 2002a, 2002b).

The role of the researcher is not to assist with creating meaning. The researcher does not create the data, but discovers it by letting the data speak for itself (Glaser 2002). That is, the researcher does not impute meaning to, or infer what participants are saying during interviews, but listens to participants and is sensitive to what is emerging from the data (Glaser 1998). This of course, involves the researcher in understanding, or making sense of what the participant is saying. This may involve shared meanings, because the researcher usually speaks the same language and may therefore, share meaning of terms used in language. The researcher may also have knowledge and experience of the phenomena under study. However, just because the researcher has the

capacity to understand the participant, does not mean that emergent concepts are a co-construction of reality. I agree with Glaser (2002, p. 2), that "data speaks for itself". From participants' actions and their meanings, the role of the researcher is to raise participants' perspectives to the abstract level of conceptualisation (Glaser 2002b). This is done with a concern for theory generation, not conceptual description (Glaser 1998, 2001, 2002a), which appears better aligned with constructivists' co-construction of meanings and assignment of terms to participants' accounts.

2.4.4 Emergence vs. forcing debate

Charmaz (2006) claims that the researcher's own values, experiences and priorities influence the data, and therefore he should examine this influence on the generation of ideas and co-construction of data. Glaser (1992, 2002b) argues that to view the researcher's knowledge, values or interests as contributing to data, is to force preconceived ideas on the data. This difference of opinion is known as the emergence vs. forcing argument in the literature.

Glaser does not disagree that the researcher's knowledge has an influence on the study. It is a common misconception that the classic (Glaserian) grounded theory view is that the researcher enters the field ignorant of any theory or knowledge relating to the phenomenon, but should wait for the theory to emerge purely from the data (Goulding 2005). This is not the case as clearly stated by Glaser & Strauss (1967, p. 253): "the core categories can emerge in the sociologist's mind from his reading, life experiences, research and scholarship; no sociologist can possibly erase from his mind all the theory he knows before he begins his research. Indeed, the trick is to line up what one takes as theoretically possible or probable with what one is finding in the field". Hence, a central tenet of ground theory research is theoretical sensitivity founded on Blumer's (1969) notion of sensitising concepts that give the researcher initial ideas to pursue, informed by knowledge, assumptions, experiences and disciplinary perspectives (Glaser 1978; Charmaz 2006). But, the possession of these does not necessarily mean that the only influence of this on a grounded theory study is co-construction of data. Glaser (1978, 1998) asserts that it is possible for the researcher to utilise own knowledge, whilst guarding against bias and conjecture, through theoretical sensitivity and theoretical sampling, woven together by constant comparison. These combined methods ensure that concepts emerge from the data rather than being imposed by the researcher (Glaser & Strauss 1967; Glaser 2002). The researcher's assumptions, experiences and knowledge are not viewed negatively, but as something that can be helpful in developing and maintaining theoretical sensitivity to what is going on in the observational-interview data (Glaser 1998).

Glaser's (1998) argument is that the grounded theory researcher's focus is on developing conceptual hypotheses that are generated from data and not preconceived or forced. Misconstructions, which could be viewed as the influence of the researcher on the data, are corrected through the process of constant comparison, theoretical sensitivity and theoretical sampling (Glaser 1998). Emerging concepts and their properties are discarded if not part of the participants' world (Cutcliffe 2000), thus everything must *earn its way* into the data (Glaser 1978).

Consideration of these debates contributed significantly to me being able to select a grounded theory approach for this study. I decided to select the classic (Glaserian) grounded theory approach for two main reasons. Firstly, I disagree with Charmaz regarding researcher influence on data. The fact that the researcher has knowledge of the phenomena, or is part of the research process does not necessarily mean that there is a co-construction of data. I agree with Glaser that the exact grounded theory methods, particularly constant comparative analysis correct for bias, rendering the data "objectivist not constructionist" (Glaser 2002, p. 6). Hence, it is possible to discover reality; not descriptive reality but a conceptual reality (Glaser 2002). The second reason for choosing classic grounded theory is that I found Glaser's grounded theory procedures understandable, well supported by examples of its use in the literature, and with a reputation for allowing more abstract theorising (e.g., Kendall 1999).

Having selected a grounded theory approach, before embarking on grounded theory research it is essential that the researcher is clear as to which type of theory generation is required by the study: substantive or formal. The next section of this chapter explains these two forms of theory, with a focus on the generation of formal grounded theory in this study.

2.5 Substantive and Formal Grounded Theory

The relevance of a grounded theory is inextricably linked to the purpose of the resultant theory; whether its usefulness is to be within a substantive area, or whether it has greater generality. The difference is understood as the generation of either a substantive grounded theory or formal grounded theory, both of which can be generated from grounded theory research. What defines these types of theory is the extent of their generality, meaning the degree of abstractness that characterises the theory and to what degree the core category has general implications (Glaser 2007).

Substantive theories emerge from the study of a specific, limited area to address the problems of the people therein, for example how newly disabled people reconstruct their identities (Charmaz

2006). A substantive theory that *works* is a theory that explains, predicts and interprets what is occurring in the substantive area of inquiry (Glaser 1978), subsequently much of the published grounded theories are at the level of substantive theory (Glaser & Strauss 1967; Strauss & Corbin 1994; Charmaz 2006). For example, from the discipline of occupational therapy Jonsson et al. (1999) developed a substantive theory of the occupational impact on adults of disability resulting from poliomyelitis sequelae. From this study, occupational therapists have identified strategies that help patients to adjust to the impact of disability on their occupational lives (Stanley & Cheek 2003).

Similarly, regarding the current study, I could develop a substantive theory of effort for activity participation in patients during their recovery from physical or mental health problems. However, such substantive theory could be limited to what Glaser (1978) describes as a "little island of knowledge" (p. 148), in contrast to the wider generality of formal theory, potentially making it useful to a wider range of people (Hardy 1974). The aforementioned occupational therapy study by Jonnson et al. (1999) can be used to illustrate this point. That is, researchers could build on this substantive theory of occupational impact on adults of disability resulting from poliomyelitis sequelae, by studying the process of adaptation to the occupational impact of a variety of diseases and disabilities using grounded theory. A formal theory could arise about the process of occupational adaptation, making a significant contribution to occupational therapy knowledge (Stanley & Cheek 2003).

With regards to the aims and objectives of the current study, substantive theory generation would not satisfy the objective to discover theory that has relevance beyond any delineated area i.e., formulate a theory of the relation of effort and maximum effort to the conditions for, process, and results of activity participation. What is more, formal theory that has greater general implications than substantive theory, is required if a theory of effort is to contribute to the existing Theory of Creative Ability. As a middle-range theory, the Theory of Creative Ability has a significant degree of generality: it is a theory applicable to human beings generally, not limited or specific to discrete ages, social circumstances, or diagnoses. Therefore, to discover a contributory theory of effort through research requires the development of formal rather than substantive theory. The conceptual raising of the core category for formal theory, can still allow a formal grounded theory to be a middle-range theory (Merton 1967; Glaser & Strauss 1967; Glaser 2007b), because it falls "between the minor working hypotheses of everyday life and the all-inclusive grand theories" (Glaser 2007b, p. 3).

In contrast to substantive grounded theory, the procedures for formal grounded theory are less well known. There has been confusion in the literature regarding how formal grounded theory differs from substantive grounded theory, and what constitutes formal grounded theory. In order to clarify formal grounded theory, generality as the source of confusion, is described and discussed in the next section.

2.5.1 Generality and general implications: clarifying Formal Grounded Theory

In contrast to substantive grounded theory, examples of the application of formal grounded theory procedures are rare. According to Glaser (2007a), formal grounded theory (FGT) has received scarce attention and has been nigh on ignored since it was first presented in *Awareness of Dying* (Glaser & Strauss 1972). Several reasons have been put forward to explain the lack of FGT research. Charmaz (2006) suggests that substantive grounded theory is mostly undertaken because it addresses problems in a specific area (Charmaz 2006). Related to this view, Glaser and Strauss (1967) suggest that most researchers steer clear of formulating FGT, because remaining in a substantive field where one has established knowledge, allows the researcher to feel secure. Glaser (1978) also suggests that developing substantive theory into FGT is a challenging endeavour, because formal theory generation does not correspond to typical qualitative data analysis methodology. As a result, the concern is that researchers have given way to consigning grounded theory to the qualitative paradigm in such a way as to erode the power of grounded theory as a general methodology (Glaser 2002, 2004; Glaser & Holton 2004).

Contemporary researchers have a large number of good examples of substantive grounded theory to better inform them, including *Examples of Grounded Theory* (Glaser 1993), designed to provide models of grounded theories. But FGT has not benefited from the same attention from the originators of grounded theory. Glaser (2007a) recognised that due to their lack of knowledge about FGT at the time, the explanation of FGT was too general in the early publications on grounded theory i.e., *Awareness of Dying* (Glaser & Strauss 1972) and *The Discovery of Grounded Theory* (Glaser & Strauss 1967). Formal grounded theory was not clearly defined and lacked specificity, with only generality identified as the feature that defines it from substantive theory (e.g., Glaser 2007a). Subsequently, a focus on generality caused confusion amongst sociologists and many years were filled with examples of inaccurate methods of FGT generation as methodologists failed to work out the FGT approach (Glaser 2007a). According to Glaser (2007), researchers tended to focus on describing the differences and similarities between conceptual areas under study rather than on constant comparisons for conceptualisation. In Glaser's (2007)

view, the combined failure to clearly define and explain FGT, plus ensuing inaccurate examples, meant that researchers had no clear route to formal theory generation. This would not have been aided by the fact that Glaser and Strauss could not provide detailed guidance on the generation of FGT, but were awaiting examples to be generated by sociologists from whom procedures could be established (Glaser & Strauss 1967).

Strauss (1987) published the FGT *Awareness Contexts*, however this served to evoke frustration from Glaser (1992), over what he perceived to be Strauss' lack of an accurate distinction between substantive and FGT. Strauss suggested that what differentiates FGT from substantive grounded theory is that the former emerges from studying phenomenon in many differing situations. Glaser's retort was that it is not merely the range of situations in which a phenomenon is studied that differentiates them, but that FGT achieves greater heights of conceptualisation. In FGT, starting with a concept, the constant comparison method is used to *conceptually* compare the core category from a substantive area with other substantive areas, thus conceptually raising a substantive grounded theory's core category to have general implications beyond the substantive area (Glaser 1999).

Given the lack of clarity regarding FGT, the next section of this chapter presents known procedures for formal theory generation, leading to a rationale for the procedures selected for this study.

2.6 Generating formal grounded theory: a creative process

Glaser (1978) suggests several bases of grounding and procedures for generating FGT: 1) Re-write-up technique, 2) Data, 3) Substantive theory, 4) Basic Social Process, 5) and Cumulative knowledge (Table2-1). Although Glaser suggests bases and procedures for FGT, detail on the practical application of the procedures has not been forthcoming. Furthermore, a review that I undertook of the small number of published FGT studies, identified that researchers tend not to refer to Glaser's suggested bases and procedures. The exception is Wiseman's (1987) account of developing formal theory from cumulative knowledge, inspired by Glaser and Strauss' (1967) suggestion that formal theory could be developed by applying one substantive grounded theory to similar examples in different research topics. In the absence of detail on how this may be possible, Wiseman (1987) developed what is called the Cumulative Knowledge Technique to compare two concepts that emerged from one substantive study, with four other research projects that had no apparent similarities. As a result, the concepts were found to transcend substantive areas, and through conceptual comparison were elaborated.

As illustrated by Wiseman's study, procedures appear to be developed by individual researchers. This is may be partly due to permission from Glaser (2007b) to use a combination of FGT approaches. In this respect, researchers are providing the procedures that Glaser and Strauss (1967) said they were waiting for, and from which they might develop knowledge of formal theory generation. Being open to development of procedures reflects the flexibility of Grounded Theory Methodology, rigid rules for which would be counterproductive to the creativity that is inherent in the generation of grounded theory (Wilson & Hutchinson 1996). In my view, there is the risk however, that while researchers claim to have undertaken grounded theory research and developed FGT, this may not be the case. It is widely acknowledged that grounded theory research has been diluted to fit the canons of qualitative research (Charmaz 2009; Glaser 2001), therefore methods for the more challenging task of FGT generation needs due consideration.

Table 2-1 Bases of grounding and procedures of formal grounded theory.

Basis of grounding		**Procedures**
1	Re-write-up technique	Re-write of one substantive area theory by omitting substantive words
2	Data	Direct formulation: Initial set of substantive data is constantly compared to data from diverse substantive areas when no substantive theory exists
3	Substantive theory	A substantive theory is comparatively analysed with other research data and substantive theories. Other data provides *initial* direction in developing relevant conceptual categories, conceptual properties of categories, hypotheses relating these concepts, and in choosing possible modes of integration for the formal theory. During the process of generating the FGT, the relevant categories, properties, and hypotheses change
4	Basic Social Process (BSP)	A BSP (or other core variable) is selected and compared with the BSP in literature in its general and more specific conceptual forms
5	Cumulative knowledge	Ethnographic studies, multiple substantive and formal theories and direct data collection

Regarding Glaser's suggested bases in Table 2-1, with the exception of the Re-write-up technique, the bases for FGT generation is a core variable, a set of data, or a Basic Social Process from a substantive grounded theory. Thereafter, the procedures for theory generation are the same: theoretical sampling and constant comparative analysis. The procedures suggest flexibility regarding sources of data, congruent with the grounded theory tenet that data can be sampled from anywhere and in any form (Strauss 1987). For FGT, data does not necessarily have to be sampled from a specific field or body of knowledge, but from which a conceptual formal theory can be generated (Glaser 2007). This is expressed most clearly by Strauss (1994), who stated that theorists "do not merely work when at the desk or in the library: work goes on subliminally, and while other activities are taking place….while walking, driving, even in the duller moments of concert going. Then, quite fortuitously, one also comes across sparking, and even conforming data

in various forms: in newspaper articles, friends' stories, books read for entertainment, in events occurring in one's own life" (p. 367).

An aspect of sampling that differentiates FGT from substantive grounded theory, is the particular importance of using literature to develop theory. Theoretical sampling according to the emergent core category guides literature reviewing for conceptual comparisons of existing substantive data (Glaser 2007). Data are compared with concepts of the core category in order to gain new conceptual comparisons through new indicators in the data (Glaser 2007). To develop a category to its fullest requires multiple comparisons across theoretically and conceptually relevant groups, irrespective of whether they are similar or dissimilar, providing the data indicate a similar property of category (Glaser 2007b). That is, formulating theory through systematically comparing groups is steered by the logic emerging from the analysis (Strauss 1987).

In summary, to develop FGT necessitates that researchers reach a degree of conceptualisation that results in the theory having general implications beyond the substantive area. Although there are suggested bases and procedures for achieving this, together with a few examples of formal grounded theories in the literature, researchers must configure procedures according to two factors: 1) the prior substantive grounded theory/theories, if any exist, as the basis for grounding; 2) the theory development that is germane to the formal area (Glaser 2007). Glaser and Strauss (1967) urged researchers to consider developing formal theories out of seemingly isolated substantive studies. However, as Glaser (2007) indicates, this necessitates that there are a significant number of relevant sources of data that are published and available for comparison for FGT development. Regarding the current study, there is neither substantive theory of effort, nor a Basic Social Process as a basis for grounding a FGT study. Therefore, a substantive theory needs to be generated. With reference to Table 2-1, I deemed the Data technique to be the most suitable basis for firstly generating a substantive theory of effort, and as the base from which formal theory could develop. The Data technique has flexible procedures for extending the substantive theory's core category into a formal theory, which I considered essential to achieving the goal of developing a formal theory of effort.

The procedures in the current study for substantive and FGT development are outlined below, and relate to the three stages of the study identified in Chapter One.

Stage One: develop a substantive grounded theory of effort from data in the field of occupational therapy provided to people with mental health and physical conditions. Continue to develop the

substantive theory beyond the field of occupational therapy /healthcare through theoretically sampling the general public, extending generality. At this stage the core concepts, category and processes will be firmly established, allowing exploration of the literature to confirm, or refine the emergent theory.

Stage Two: Verify that the emergent theory is plausible, works and has fit with a sample of occupational therapists and members of the public, thus indicating degree of generality. If required, further compare with the literature to refine the theory.

Stage Three: Conduct a literature review of the core category (effort) to confirm, or refine the theory. The emergent theory of effort is then conceptually compared with other relevant theoretical works, including the Theory of Creative Ability. The latter aims to identify the contribution of emergent theory to the Theory of Creative Ability, the process of which, combined with the former, contributes to establishing the emergent theory's formal qualities. This leads to the formal theory of effort.

The three stages of the current study are illustrated by Figure 3-1 at the start of Chapter Three (Stage One methods).

2.7 Conclusion

This chapter has provided a detailed account of the methodology used to address the current study's research questions and objectives. The rationale for the decision to adopt the classic grounded theory approach (Glaser & Strauss 1967) has been made explicit with reference to relevant methodological literature. The difference between substantive and formal grounded theory has been clarified. A rationale has been clearly stated for selecting the Data technique in order to generate a substantive theory of effort, from which a formal theory can be developed in the current study. How substantive and formal grounded theory was developed over the three stages of the study, has been outlined.

The next chapter (Stage One methods) provides a detailed account of the methods employed in stage one of the current study, in applying the methodology discussed in this chapter.

CHAPTER THREE

Stage One methods

3.1 Introduction

The current study comprised of three stages for the purpose of developing a formal grounded theory of effort. Classic grounded theory (Glaser & Strauss 1967; Glaser 1978, 1998, 2001, 2003, 2005) was used throughout the study. This chapter presents a description, discussion and justification of the methods selected to address the Stage One research question, aims and objectives of the study. Stage One of the study was undertaken in two phases (Fig. 3-1). Stage One, phase one utilised observation and interview methods of data collection. Application of the grounded theory procedures of theoretical sampling, constant comparative analysis and memo writing sought the emergence of a substantive theory from the field of occupational therapy in healthcare contexts in South Africa and the United Kingdom (UK). Stage One, phase two, used interviews to further develop the generality of the substantive theory through theoretically sampling the general public in the UK.

Chapter Four presents Stage Two of the study, which employed the focus group method to explore whether the theory of effort generated in Stage One was plausible. Chapter Nine addresses Stage Three of the study aimed at formalising the grounded theory of effort. The relationship between the stages of the study is illustrated by Figure 3-1, which provides an overview of the research process and procedures designed to develop a formal grounded theory.

3.2 Stage One sample

In grounded theory research, the initial sample is not selected from the population based on certain variables, but on where the phenomena under study are known to exist, and with a broad general knowledge of the topic (Smith & Biley 1997). Prior to commencing the study, I reasoned that the therapy context of the occupational therapist and his patient is where a concentration on activity participation and effort is likely to be found. In this context, activity participation is the focus for both the patient and the therapist. Occupational therapy is provided to a broad range of people across mental health, physical and learning disabilities services, affording access to a diverse sample. This is relevant to my supposition that the conceptualisation of effort may differ according to whether a person has a physical condition that is demanding on physical effort for

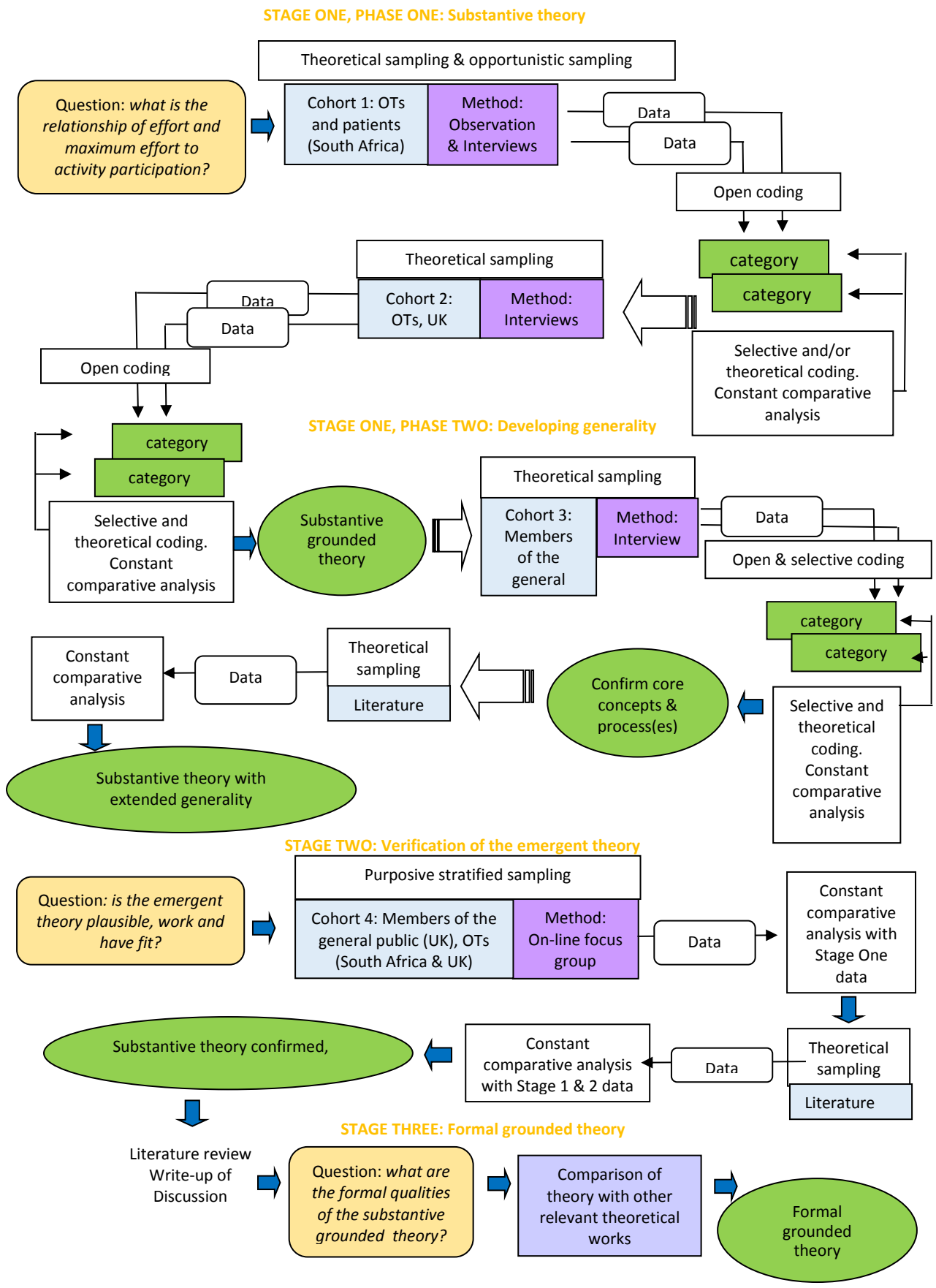


Figure 3-1 The research process and procedures.

activity participation, or has a mental health diagnosis where mental effort may be more of a concern. I considered these potential dimensions of effort to be important in terms of broad variation for ultimately developing a formal grounded theory.

Sampling patients and therapists could also afford the opportunity to explore Creek's (2010) assertion that concepts are thought of differently depending on whether one is observing them, as in the case of a therapist, or performing them such as a patient during therapy. If a formal theory of effort is to be generated as a contribution to occupational therapy practice, it is vital that effort is explored and understood from these two perspectives, in order to capture both the behaviour and the context that gives the behaviour meaning (Chenitz & Swanson 1986). Furthermore, in my professional opinion as an occupational therapist, it would be unacceptable to research activity participation without including the voice of the people that we work with. Equally, with respect to an aim of the current study to discover effort as a contribution to the Theory of Creative Ability, I was aware that occupational therapists are using the Theory of Creative Ability to assess patients' effort. Therefore, in addition to patient data, I considered it important to gain data on occupational therapists' understanding of effort. Based on this rationale, the Stage One sample included two cohorts from the field of healthcare (Fig. 3-1):

Cohort one: patients and occupational therapists in South Africa
Cohort two: occupational therapists in the UK

Inclusion criteria (patients):

Have mental capacity to provide informed consent, or informed consent has been provided by a doctor, or next of kin.
Receiving occupational therapy in South Africa.
English speaking.

Inclusion criteria (occupational therapists):

State registered occupational therapist.
Providing occupational therapy within a healthcare service in either South Africa or the UK.
English speaking.

The rationale for sampling from two countries is that concepts are socially constructed and their meanings vary across cultures, contexts and time (Toulmin 1972). South Africa is the country from which the Theory of Creative Ability originated; therefore there is the potential for effort to have culturally influenced meaning, both within the discipline of occupational therapy and in the general population. Many therapists have also adopted the Theory of Creative Ability in the UK, which is a culturally different country to South Africa where effort and maximum effort may hold

different meanings. Any differences should be identified and understood. Doing so may prevent transferring terms and the concepts they represent from one culture to another, without critical appraisal of their cultural relevance. This has been the propensity of the occupational therapy profession (Creek 2010). I therefore decided to recruit a cross-national sample, which can be useful for comparing manifestations and meanings of concepts, in order to generalise from them (Hantrais 1995).

On completion of data collection from the first two cohorts, the aim was to move theory building from the substantive area to explore other incidences of effort and maximum effort for activity participation. To move beyond the substantive area is an essential component of formal grounded theory generation (Glaser 2007). For this purpose, in Stage One, phase two I recruited a cohort comprised of members of the public in the UK. Analysis of data from the first two cohorts did not indicate any significant differences between the manifestations and meanings of effort and maximum effort in South Africa and the UK, therefore recruitment of members of the public that were not patients in South Africa, was unnecessary. The aim of Stage One, phase two was to gain data on a broad range of experiences of activity participation, therefore the inclusion criteria had few limits.

Cohort three: members of the public in the UK.

Inclusion criteria (public):

Have mental capacity to provide informed consent.
Adults.
English speaking.

The starting point for theoretical sampling and recruitment was indicated by the emergence of the concept of willingness in phase one data. To be willing to participate in activity was thought to be a necessary attitude and antecedent to a decision to exert effort. This emerged out of data on undertaking activity that was experienced as a hardship, or difficult to endure. Therefore, theoretical sampling drove the initial recruitment of sports people, personal trainers and then gravediggers, based on the rationale that they were likely to assist in understanding the phenomenon of willingness. Subsequent sampling was driven by the need for a range of occupations, activities, roles and ages in the sample, for broad variation.

3.2.1 Sample sites

The sites for recruitment of Stage One cohort 1, is stated in Table 3-1. The sites of cohort 1 were two mental health hospitals and one physical healthcare hospital in South Africa. A total of three weeks was spent at the mental health hospitals, and one week at the physical hospital. Various

environments and contexts within those settings created the field of study, in particular occupational therapy department therapy rooms and associated areas in which therapists worked with patients (Appendix A).

Cohort 2 comprised of occupational therapists from a number of healthcare services in the UK.

Cohort 3 comprised of members of the public, not site specific.

Table 3-1 Stage One sample cohort sites.

Cohort	Site code	Site type	Sample population
1	A	Mental health care	Patients, occupational therapists, South Africa
	B	Mental health care and physical health care	Patients, occupational therapists, South Africa

3.2.2 Sample size

In grounded theory, the sample size is not pre-determined, but is indicated when data saturation occurs. That is, when incidences occur so repeatedly that further data appears to have no additional interpretive worth (Sandelowski 2008; Saumure & Given 2008; Padgett 2008). In the current study, saturation was reached with a total sample of 71 participants.

3.2.3 Sampling methods

Theoretical sampling was used, as decisions made in the selection of occupational therapists, patients and the public were predominantly based either on theoretical suppositions, or that a sample exemplified potential understanding of the phenomena under study (DePoy & Gitlin 2005). Therefore, the focus of data collection was sampling for what seemed relevant in terms of conceptual emergence and the emerging theory (Glaser & Strauss 1967; Glaser 1978). An example of theoretical sampling was provided in section 3.2.

During Stage One, phase one, the initial field of study was the therapist-patient contexts in hospitals and outpatient clinics. The ever-changing patient population in these settings meant that ongoing recruitment to the study sometimes required an opportunistic sampling approach, also known as convenience sampling (Wallace 2005). Opportunistic sampling allows researchers to recruit individuals who are conveniently accessible and agreeable to participate in a study (Liamputtong 2010). Opportunistic sampling also took place when patients unexpectedly attended an observed occupational therapy session, therefore they were recruited at the time. This illustrates that researchers may need to make sample decisions based on who is available and willing to take part in the study (Hesse-Biber & Leavy 2005). Although in other qualitative research, opportunistic sampling is viewed as a weak method (Liamputtong 2010), this is not the case in grounded theory research, because it is not a representative sample that is required, but

the incidents, events and happenings that denote the phenomena under study (Corbin & Strauss 1990). Grounded Theory Methodology involves a process that is flexible and opportunistic (Jorgensen 1989), and encourages the researcher to make good use of opportunities that arise (Whyte 1984).

Consistent with grounded theory research, theoretical sampling was also used to select varying types of data such as, literature, media, general conversations and other date sources (Glaser 1978; Strauss 1987). The contribution of some of the literature to theory development in Stage One, is explicit in Chapter Six (Findings).

3.2.4 Accessing the sample

To gain access to patients and occupational therapists in cohorts 1 and 2, the occupational therapy heads of department (HOD) at each site were contacted by email with a covering letter requesting them to consider me gaining access to their occupational therapy staff and/or patients. Attached was a summary of the protocol and Participant Information Sheets for occupational therapists (Appendix B). In South Africa, the Participant Information Sheets for patients were also provided to occupational therapists (Appendix C). In South Africa, the HOD managed the gaining of approval from the Human Ethics Committees at each site. Ethics approval was not required in the UK.

Prior to commencing data collection, I spent time with the occupational therapists to discuss the study and become familiar with the setting, their responsibilities, schedule and the practical challenges to undertaking the study. In terms of recruiting and accessing patients, the occupational therapists suggested patients that met the inclusion criteria. Potential participants were provided with a written Participant Information Sheet and assisted to understand the study as needed so that they were able to give informed consent (Appendix C). Recruiting patients presented a number of challenges, a detailed discussion of which is presented in Chapter Five (Ethics).

As previously mentioned, the first cohort of three participants (members of the public), were sports people. A sports centre was the initial site, at which I displayed a poster promoting the study (Appendix D). The centre staff also had Participant Information sheets available for interested members of the public (Appendix E). The remainder of the sample was accessed by directly approaching potential participants. For example, a friend suggested that someone known to him as a swimmer may be interested in the study, and I contacted him directly. This participant was also a gravedigger, and provided contacts of other gravediggers to approach. I sought several

participants of similar occupations in order to compare experiences of effort in the doing of those occupations.

3.3 Non-participant observation for grounded theory data collection

Observation of the phenomena under study is a classic grounded theory method, because it allows researchers to witness, gather impressions of, and subsequently interpret the events and interactions that take place in a social setting i.e., the phenomena under study (Bluff 2005). Within the occupational therapy profession, it has been argued that there is a need to use research methods that can capture the experience and complexity of activity participation (Rebeiro 2001). To this end, observation is a suitable method (Rebeiro 2001).

With cohort 1, multiple periods of observation of patients and therapists took place over several weeks in South Africa. Observations were made of a broad variety of activity participation in occupational therapy sessions and in ward areas and hospital grounds. Observation was made of actions, interactions and communication between patients, therapists and between patients and therapists.

In Stage One, phase one, unstructured, non-participant observation was selected as a data collection method. The unstructured dimension of this method involves the researcher entering the field without a checklist of pre-set behaviours to look for (Sanger 1996; Mulhall 2003), or imposed *a priori* descriptive categories (Murphy et al. 1998). This approach is congruent with classic grounded theory, which argues that in order to discover theory, researchers should enter the field devoid of preconceptions regarding what is likely to be germane (Glaser 1978). It is also acknowledged that it is difficult for the researcher not to have some knowledge of the phenomena under study (Moore & Savage 2002). To protect against researcher bias, I approached observation with an open mind and curiosity towards what I might discover. This is expanded upon in Chapter Eleven (Contributions and Recommendations).

Another dimension of observation approaches is the role of the observer, which relates to the degree of the observer's participation and involvement in the observed situation (De Walt & De Walt 2002). The two main categories of observation roles are participant observation and non-participant observation (Robson 2002). There are four sub-categories of observation, suggested by Gold's (1958) to be the roles of complete participant, participant as observer, observer as participant and complete observer. From the participant observation category I selected the participant as observer role for the initial data collection from patients and therapists. Participant

observation allows the researcher to participate with research participants in the naturally occurring situations under study (Rice & Ezzy 1999). In this role, the research intent of the observer is made clear to the group studied and the observer is able to participate in and observe the group's activities, ask members about what they are doing and what is going on in the situation (Robson 2002). For reasons reflected upon in Chapter Eleven (Contributions and Recommendations), on entering the field I changed the approach to non-participant observation, also known within Gold's (1958) typology as a complete observer role (Murphy et al. 1998; Atkinson & Hammersley 1994). In this role, the research intention of the observer is clear to the group studied, but the observer avoids participation in the setting and interaction with the group in the interests of objectivity and detachment (Murphy et al. 1998). This role was suitable for undertaking classic grounded theory research, for which Glaser (2002) asserts that the researcher should enter the field as a neutral observer.

3.4 Methods for collecting data from observation

Whichever observation approach is selected, there are inherent difficulties in uncovering participants' meanings from their actions due to the fact that human action is essentially ambiguous (Murphy et al. 1998). Researchers need to be aware of the potential for mere reproduction of participants' interactions and accounts at the cost of analyses, or neglecting to study participants' practices due to pre-occupation with participants' meanings (Silverman 2014). Furthermore, observational research relies on good observation skills, a good memory and clear methods of recording observations. There are a variety of recording methods available to the researcher who should select methods in accordance with individual needs, preferences, and judgment regarding the best methods for the study (Pope & Mays 2006). The careful selection of these can enable clear documentation of observations whilst guarding against mere reproduction of events (Silverman 1993). In this study, I used memos, field notes and video recording.

A 'Flip' recorder, the size of a mobile phone was used as a non-intrusive device to video record patients whilst undertaking group activities. The rationale was that recordings could facilitate discussion with the occupational therapists regarding differing observable signs of effort between patients. The recordings could also be revisited for data analysis purposes. I also anticipated that it may be advantageous to video members of the public doing activity. After the first videoed session with patients and therapists however, it was questionable whether videoing had a useful contribution to make to data collection and analysis. Subsequently, I decided not to pursue this form of data collection any further. This decision is evaluated in Chapter Ten (Evaluation of the research).

3.4.1 Field notes

Field notes were kept as a written account of thoughts and observations in the field (Bluff 2005). In order to keep track of what was happening in occupational therapy group therapy sessions, I drew a seating plan of participants and numbered each one so that I could analyse their interactions. For example, I noted verbal exchanges, gestures, non-verbal body language, actions and expressions. An example of field notes made on a group activity is presented in Appendix F.

3.4.2 Theoretical memo writing

A tool for grounded theory data collection and analysis is theoretical memo writing, which is a continuous set of notes that support the researcher by providing a record of thoughts and ideas (Glaser 1978). These may be recorded as a stream of insights, intuitions, discussions about codes, or other thoughts (Strauss 1987). As data accrue, the emphasis is on dialogue, challenging ideas and their development (Glaser 1978). As such, memos are data. I wrote memos immediately after observations and interviews, and throughout the study including writing on literature. Memo writing was an important tool for identifying the direction of the study, for example, to identify questions for subsequent interviews. Theoretical memo examples are provided in Appendix G.

3.5 Interviews for grounded theory data collection

When using non-participant observation the researcher is forced into drawing inferences from behaviour (Murphy et al. 1998), therefore combining observation with interviewing participants can clarify the meaning of events from participants' perspectives (Bluff 2005). This was important for meeting the aims of this study, in terms of discovering the meanings of interactions and behaviours in relation to effort and maximum effort. Understanding the phenomena from the perspectives of the participants is an aim of grounded theory research for theory development (Holloway & Wheeler 2010; Rice & Ezzy 1999). Glaser (2004) goes further to argue that interviews are essential for developing a *true* grounded theory.

3.5.1 Interview procedures

Interviews were first undertaken with patients and therapists in South Africa, followed by therapists and members of the public in the UK. As per the Participant Information sheets, participants were aware that interviews would explore their perceptions and experiences of effort and maximum effort. Participants were interviewed one or more times, in response to what was needed for theoretical sampling (Glaser 2001). Grounded theory requires the freedom to interview in whatever style works at the time, therefore there is no typical grounded theory

interview (Glaser 2001). Interviews varied in length from a short conversation of 10 minutes to a longer 75 minute interview.

The interview approach was unstructured interviewing. In accordance with the grounded theory approach of entering the field without pre-conceptions of what is likely to be of importance (Glaser 1978), the initial interviews did not start with pre-formulated research questions and/or hypotheses. Rather, I used what Spradley (1979) calls a grand tour question. That is, a broad open-ended question related to the general topic area, which encourages participants to respond to the general topic in the way that they wish (Spradley 1979). The opening question enquired about activity participation, aiming to discover whether effort or maximum effort had relevance. Direct questions about effort were later also asked, using semi-structured interviewing. Examples of interview questions are in Appendix H. After the first eight interviews with patients and therapists, theoretical sampling based upon emerging concepts and theory brought a sharper focus to subsequent interviews (Glaser 2001). A reflection on the interview procedures employed, is provided in Chapter Eleven (Contributions and Recommendations).

With cohort 1 occupational therapists, interviews were undertaken within 24 hours of observing them in therapy sessions, and were usually conducted in their workplace offices. Interviews were undertaken with most patients immediately after the observed session in a private room next to the therapy room, or a private room on the ward. Participants consented to the audio recording of interviews for analysis purposes. The recording device was a digital recorder integrated into a pen in association with a book that recorded notes that could be uploaded onto a computer. Ensuring participants informed consent for its use, is discussed in Chapter Five (Ethics). The UK occupational therapists were interviewed in a private room at their place of work. Interviews with members of the public took place at a location convenient to the participant, for example at a café, their home or workplace.

I fully transcribed all interviews. Glaser (1998) does not recommend recording interviews because he maintains that it slows data collection. However, modern technology such as the pen recorder linked to a book that records notes, has advanced recording processes. Therefore, Glaser's concern was not one that I shared. Glaser (1998) also suggested that recording interviews can lead to collection of much the same type of data, thereby delaying theoretical sampling, and that there is the danger of being overwhelmed by conceptually repetitive data. Nonetheless, the recording of interviews is not uncommon in grounded theory research (Partridge 1996; Thulesius 2002). In the current study, the recordings and their transcription was essential for data analysis.

3.6 Other sources of data

Although formal interviews and direct observation in defined fields of study are the primary data collection methods, it is common for grounded theory researchers to also use other strategies (Jorgensen 1989). For formal grounded theory development, it is essential to see the core variable working beyond the boundaries of the immediate substantive area (Glaser 2007). For this purpose, varying data collection techniques are required for data that provide different views or vantage points, yielding greater diverse comparative information on categories than any single mode of knowing (Glaser 2007). Hence, my own knowledge and experiences, informal observation of daily events, media and discussions were also data. These are legitimate sources for grounded theory researchers (Bryman & Teevan 2005). During the summer of 2012 in the UK, of particular note were media discussions of effort and maximum effort during the London 2012 Olympic Games.

3.6.1 Reflexive diary

Reflexivity is the researcher's critical examination of his or her research experience, decisions and interpretations (Charmaz 2006), and the influence of researcher-participant interactions on the research process (Hall & Callery 2001). Reflexivity acknowledges that every researcher has some personal involvement in the research process and is influenced by previous knowledge as well as attitudes and beliefs (Berg & Smith 1985). A reflexive diary was kept to explore this, and to further understand the research process, ethics and findings. The use of the reflexive diary to examine the ethics of the study, is discussed in Chapter Five (Ethics).

3.7 Data analysis

Data were analysed concurrently with data collection, which in turn was guided by theoretical sampling. Through constant comparative analysis, emergent categories were inductively derived from the participants' accounts and relations with activity participation, and grounded in the field data. Data analysis began at the first observations and interviews and continued until the end of the study, including during the writing-up process.

3.7.1 Open and selective coding

Glaser (1978) stipulates that for constant comparative analysis there are two coding procedures: substantive and theoretical coding. Substantive coding is comprised of two sub-phases: open and selective coding. The data were initially analysed using the open coding process described by Glaser (1978) i.e., coding the data line by line in order to code the data in every possible way

(Glaser 1978). Then, the course of each participant's story was identified, comparing and contrasting key events in their accounts, incident-to-incident and person-to-person (Glaser 1978). This involved attention to Glasers' (1978, p. 57) questions that guide open coding: "What is this data a study of? What category does this incident indicate? What accounts for the basic problem and process?" As acknowledged by Richards and Morse (2013), comparison enabled the identification of common patterns, similar emotional responses, interaction and behavioural strategies, antecedents and consequences.

Interpreting and conceptualising what was going on in the data, was aided by interrupting open coding with writing theoretical memos on arising ideas. This combined approach of using constant comparative analysis and theoretical memos led to further theoretical sampling. For example, *using your resources* was a concept that emerged from the first cohort interviews in relation to effort. This seemed to relate to a code emerging from notes on observations made on the exertion of effort, the code being *applying self*. Using Glaser's (1978) indicator model (Fig. 3-2), indicators of these two concepts were compared incident-to-incident and person-to-person as they emerged in the data. While staying open to the data, these concepts were explored in subsequent data collection using theoretical sampling. Through constant comparative analysis, it was established that these concepts had relevance (Glaser 1978).

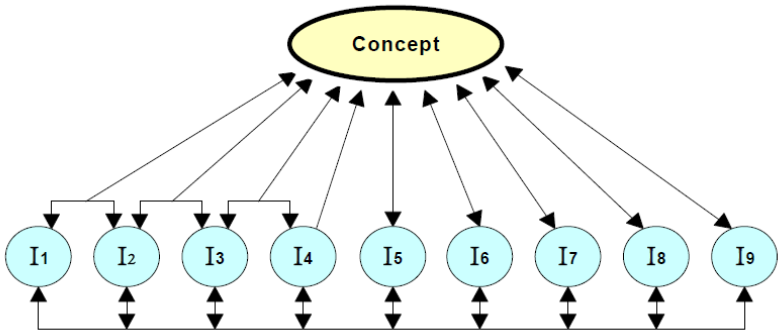


Figure 3-2 The concept indicator model (Glaser 1978, p. 62).

Having earned their way into the study through demonstrations of their relationship to the phenomenon under study, these concepts were explored in terms of how consistently they were found in the data (Glaser 1978). This resulted in a coded category. Hence, the aim of this open coding process is to generate "an emergent set of categories and their properties which fit, work and are relevant for integrating into a theory" (Glaser 1978, p. 56). To continue with the aforementioned example, comparisons of other indicators of *using your resources* and *applying*

self resulted in the categories of *putting in* and *trying*. The characteristics of *using your resources* and *applying self*, contributed to identifying the properties of the category *putting in*. Thus, *putting in* and other substantive codes conceptualised the empirical substance of the area of research (Glaser 1978).

Through this process the 235 final open codes were grouped to create 24 core categories (Appendix I). To code for a core variable, selective coding was used to focus coding to variables that relate to the core variable sufficiently enough to be included in a theory (Glaser 1978). This process involves looking for the conditions and consequences that relate to the core process. Through this process, eventually the core variable of effort for relating emerged.

3.7.2 Theoretical coding

As codes and memos were generated and compared, relationships between them emerged. This led to developing theoretical codes, which conceptualise the relationships between the substantive codes as hypotheses that can be assimilated into the theory (Glaser 1978). The use of theoretical memo writing contributed significantly to data analysis throughout the study, and was particularly important for identifying relationships between codes and categories for the development of theoretical codes. Glaser (1978) provides 18 coding families for the purpose of theoretical coding, and these were considered in this study. For example, the *putting in* of effort into activity participation was related to *to improve* or *to further myself* as the anticipated result of effort. This generated theoretical codes from Glaser's (1978) Consequences coding family and Identity-Self family, indicated in the following example in brackets. For example, in the grounded theory from this study, it is hypothesised that a function of effort is to bring about change in the person [consequence], which can also be a transformation of self [identity-self].

3.8 Stage One use of the literature

At the end of Stage One, phase two, having established concepts, categories and theoretical codes, the theory seemed sufficiently grounded in a core variable, *effort for relating*. At this point, theoretical sampling of literature commenced and continued for the remainder of the study (Fig. 3-1). The role of the literature became important for developing theoretical sensitivity to grounded concepts by relating the literature to the emergent theory through theoretical sampling (Glaser 1978, 1992). For example, in the current study the concept of comfort zone was explored further through comparing it with its conceptualisation in the literature. This raises the theoretical level of concepts, sharpening them by corresponding ideas from the literature to further generate

concepts and theory (Glaser 1992). This was essential to meet the aim of this study to develop a formal theory. Key literature utilised is listed in Appendix J.

3.9 Conclusion

This chapter has provided an in-depth account of the research methods of Stage One of the current study. The Stage One sample and sites, sample access and recruitment procedures have been described in detail. The chapter has presented a clear rationale for the use of observation and interviewing supported by theoretical memo writing and a reflexive diary with reference to relevant methodological literature. Finally, a clear exposition of the study's analytical process has been presented, illustrating the decision trail that culminated in core categories that then allowed for theoretical coding to generate a substantive grounded theory. The Stage One research process has been made explicit, providing a clear audit trail that contributes to enabling the credibility of the study's findings to be judged.

The next chapter (Stage Two methods) provides a detailed account of the methods employed in stage two of the current study.

CHAPTER FOUR

Stage Two methods

4.1 Introduction

This chapter presents the methods employed in stage two of the study. First, there is a discussion regarding whether verification is relevant to grounded theory research. The Stage Two data collection method of an on-line focus group is then presented, followed by the data analysis methods used. The on-line focus group was undertaken with occupational therapists and members of the public. The purpose of the focus group was to identify the degree to which the emergent theory generated in phase one, is plausible and provides an understanding of effort and maximum effort.

4.2 Verification of theory

In the qualitative research literature, verification is defined as "the process of checking, confirming, making sure, and being certain" (Morse et al. 2002, p. 9), and also as "the activity of determining whether a statement is true or accurate" (Scwandt 2001, p. 270). The former refers to varying degrees of knowing about something, while the latter more precisely refers to seeking truth and accuracy. In the time leading to Glaser and Strauss (1967) developing Grounded Theory Methodology, the prevailing positivist paradigm consensus was that knowledge was regarded to be true or false only if it had been tested and deemed a verifiable fact. Therefore, the dominant mode of theorising in sociological research was quantitative testing and verification of what Glaser and Strauss (1967) considered to be "dreamed-up, speculative, or logically deduced theory" (Glaser & Strauss 1967, p. 5). Glaser and Strauss (1967) criticised the overemphasis on the verification of theory, claiming that what was lacking, was attention to the task of discovering concepts and hypotheses that are relevant to specific areas of research. Therefore, Glaser and Strauss collaborated to develop Grounded Theory Methodology as an explicit, methodical system for systematically deriving theories of human behaviour from empirical data (Glaser & Strauss 1967).

Glaser and Strauss were of the view that seeking verification of a grounded theory is an irrelevant undertaking for two main reasons. First, a grounded theory cannot be verified, because through conceptualisation, the data from which theory is derived are grounded concepts that are not proven, but suggested (Pace 2004). That is, grounded theories do not provide accurate description, but transcend description into conceptualisation, resulting in a theory comprised of concepts and integrated propositions, not findings (Glaser & Strauss 1967; Glaser 1978). Therefore, attempts to verify a grounded theory for establishing that the theory is correct have no position in grounded theory research (Glaser 1978).

The second reason why seeking verification is a redundant concept is that verification is perceived to have already taken place in the application of Grounded Theory Methodology, due to its exact procedures that guard against researcher bias (Glaser & Strauss 1967). That is, researchers enter the field devoid of preconceptions of what is likely to be of importance, and through the application of theoretical sensitivity, theoretical sampling and constant comparative analysis, ensure that concepts earn their way into the theory (Glaser & Strauss 1967; Glaser 2002). These fundamental procedures guard against bias and conjecture. As such, these are qualitative research verification strategies i.e., mechanisms woven into the research process for identifying and correcting errors before being integrated into the developing theory (Morse et al. 2002). If adhered to, the resulting theory should be a solid product (Creswell 2013), which in grounded theory terms, is a theory that fits.

I agree that seeking verification of truth, correctness, accuracy or certainty in relation to a grounded theory, is an unsound exercise. The way in which verification does have relevance in my view, is for the purpose of checking or confirming as per Morse et al.'s (2002, p.9) definition: "the process of checking, confirming, making sure, and being certain". In the current study, I considered that verification has value in terms of identifying whether the emergent grounded theory fits i.e., has relevance, is plausible and works as a recognisable and understandable account of how people resolve problems in social contexts, to those involved with the phenomena (Glaser & Strauss 1967). This seems pertinent given the fact that establishing fit is a criterion for evaluating a grounded theory. It is difficult to determine from the literature however, to what extent identifying fit with those involved in the phenomena is acceptable in grounded theory research. Glaser and Strauss make somewhat contradictory statements about the relationship between a grounded theory and those involved with the phenomena. I have identified two main issues for discussion: views on the capacity of those involved with phenomena to understand a grounded theory, and generating terms in a grounded theory for a target population.

The first issue is to do with the aim of grounded theory i.e., that it is a theory that fits. Glaser and Strauss (1967, p. 237) state that grounded theory is "developed in order to facilitate its application in daily situations by sociologists and laymen", suggesting that a grounded theory is for use by researchers, professionals and laypeople alike. To this end, grounded theory should "be readily understandable by laymen concerned with this area" (Glaser & Strauss 1967, p. 237), and should convey the credibility of the theory through writing it up in a way that both colleagues and laymen can make some sensible judgement about it (Glaser & Strauss 1967). This resonates well with the current study, which seeks to develop a theory of effort that will be understandable by occupational therapists and laypeople as their patients. In my view, it is important that therapists and laypeople including patients, have a shared understanding of effort so that they can communicate effectively. This is particularly important in therapy when shared understanding may enable them to work together, specifically in patients being enabled to exert effort for therapeutic benefit.

I turned to the literature for indications of *how* a researcher might ensure that a grounded theory is understandable by those involved with the phenomena, but there is no discussion of this issue. The exception is a confusing argument by Glaser and Strauss that does not support their stated ideal that sociologists and laypeople should be able to understand the grounded theory concerning them. Confusingly, Glaser and Strauss do not portray laypeople as capable of readily understanding a grounded theory. Glaser and Strauss (1967) state that while sociologists are capable of perceiving how a formal grounded theory could be used, laypeople will find this more difficult because of its abstractness and generality. They go on to suggest that it would have to be explained to them in order for them to understand its usefulness, although even then they will not be able to apply the theory themselves. This is somewhat patronising. In the field of healthcare, this sounds similar to perceptions that the general public do not have expertise in their conditions and experiences (Teram et al. 2005), and subsequently lack understanding of what intervention is required. This view has historically existed due to the power imbalance between professionals and patients. But this is an outmoded view in today's healthcare arena and not a view that I share.

It is not clear how Glaser and Strauss reconcile the aim of grounded theory to be recognisable, understandable and useful to those concerned in the area of study, including laypeople, with this notion that laypeople may not be capable of understanding it. There is no discussion in the literature of this issue. Applying a verification strategy for the purpose of checking that the theory is understandable to those concerned seems logical, but Glaser (2002) rejects the idea of gaining participants' views of whether or not the grounded theory is their voice. Glaser's (1998) view is

that participants may not understand how concepts have been developed. Participants may simply think that their behaviour is just what they do, and they may be incapable of understanding how their accounts have been conceptualised "to a transcending bigger picture" (Glaser 2002, p.5). But, in my view, Glaser's concern is based on assumption. There is no evidence in the literature that research participants are unable to understand a grounded theory that has emerged from the study of their behaviours and accounts. As previously stated, Glaser's view is discrepant with the aim of grounded theory.

Further discrepancies are evident in the literature between the aim of grounded theory and Glaser and Strauss' own development of a grounded theory. Glaser and Strauss appear to have intentionally developed their theory on Awareness of Dying in a way that is not conducive to being understood by laypeople. Apparently disregarding laypeople, they state that: "we carefully developed concepts and hypotheses to facilitate understanding of the theory by medical and nursing personnel" (Glaser & Strauss 1967, p. 240). In contradiction to their assertion that grounded theory should be usable by "sociologists and laymen" alike, (Glaser & Strauss 1967, p. 237), in Awareness of Dying their approach to theory building situates theory within the domain of sociologists, scientists or professionals, not laypeople.

Theorists constantly try to fit a term to a pattern of incidents in order to best express it (Glaser 2002). As suggested by Glaser and Strauss (1967), in developing and expressing concepts, theorists are likely to select terms that are culturally influenced. With reference to concept development, Toulmin (1972) suggests that our grasp of concepts is influenced by our particular society, particularly for a specific scientific community. Therefore, as in Glaser and Strauss' (1967) case, when a professional population is targeted as recipients of a theory, culturally influenced terms (concepts) are likely to be selected for and be more readily understandable by that culture than by those outside it e.g., laypeople. This seems to be at odds with the aim for a grounded theory to be understandable by sociologists and laypeople. This is not the approach that I wish to take in the current study. Rather, I believe that a process of verification is relevant for checking that the emergent theory is understandable to those involved with the phenomena - professionals and laypeople alike. Applying a verification strategy for this purpose, would involve gaining feedback on the emergent theory. This would also constitute further data collection on the phenomena under study as part of theory generation.

In summary, verification has no relevance to grounded theory research for the purpose of determining whether a statement or finding is true or accurate. However, in my view, verification

strategies beyond those implicit in Grounded Theory Methodology have relevance for the purpose of checking that a grounded theory is recognisable and understandable to those involved with the phenomena. The next section of this chapter provides the rationale for using an on-line focus group for the purpose of gaining feedback on the theory's degree of fit and to what degree it is understandable.

4.3 Data collection method: On-line focus group

The focus group research method originated in the 1940s from the market research work of Paul Lazarsfield and sociologist Robert Merton (Silverman 2014). Two aspects of their efforts to develop the method comprise part of the legacy of qualitative focus group research: 1) gaining people's immediate responses within a face-to-face interaction context and 2) focusing discussion on topics or issues that the researcher deems to be important (Kamberelis & Dimitriadis 2005). Contemporary focus group research is recognised as a way of collecting qualitative data, usually involving a small group discussion between people who share particular knowledge of a topic (Silverman 2014), and is an appropriate method for grounded theory research (Bluff 2005). The central feature of focus groups is the use of interaction among participants for accessing data that would not occur if other approaches were used (Webb & Kevern 2001). The group processes can enable exploration and clarification of views, steering the research in unanticipated and often unexpected directions (Kitzinger 1995).

Although commonly described as a group interview, the facilitator does not question each participant. Rather, discussion that is focused on a topic of interest is facilitated to generate data on the range of ideas that the group have about the phenomena under study, highlighting differences in their perspectives (Rabiee 2004; Wilkinson 2004). To achieve this, the facilitator asks questions and encourages participants to comment on each other's experiences and points of view (O'Connor 2012). Interaction is the key to the method (Krueger 1994; Carpenter & Suto 2008).

The use of focus groups has gained a great deal of favour in the social sciences over the past 20 years, generating a considerable amount of literature on the method across a broad range of disciplines (Wilkinson 2004; Carpenter & Suto 2008). Focus groups can generate data on a range of ideas that individuals have about the phenomena under study and illuminate differences in perspectives between groups of individuals (Rabiee 2004). This is important to Stage Two of the current study, which seeks to identify whether professionals and laypeople find the emergent theory plausible and understandable.

In occupational therapy, focus group research includes its use as a method to identify patients' and occupational therapists' perceptions of a broad range of issues relevant to healthcare (Cordingley & Ryan 2009; Skjutar et al. 2010; Lillywhite & Haines 2010; Craik et al. 2010), and occupational therapists' perceptions of particular concepts (e.g., Liedberg et al. 2010). In recent years, there has been an increased use of internet-based research approaches, including the adaptation of focus groups into the online environment (Kenny 2005; Stewart & Williams 2005). Several studies have investigated the comparability of findings gained from traditional and online focus groups, finding that the quantity and quality of data obtained online are broadly comparable to those obtained by traditional focus group discussions (Tates et al. 2009).

On-line focus groups can be conducted asynchronously (not in real time) or synchronously (in real time), or using a combination of both (Tates et al. 2009), bringing together geographically dispersed groups and difficult-to-access groups, such as, busy professionals (Mann & Stewart 2000; Madge & O'Connor 2003; Tates et al. 2009). This is useful to the current study, which seeks the views of professionals and laypeople in South Africa and the UK. The asynchronous mode, website bulletin boards and discussion groups are environments where participants type responses to researcher-set questions during a set period of time. Participants read each others' contributions and comment upon them, doing so at a time that is convenient for them individually and not necessarily when anyone else is participating (Tates et al. 2009). This can enable for more considered responses and detailed than those in synchronous or traditional forms (Stewart & Williams 2005; Kam & Chismar 2006). In the synchronous mode, participants are online simultaneously at a prearranged time, and participate in a live discussion. Synchronous focus groups are characterised by dynamic group interaction and immediacy of communication and discussion (Madge & O'Connor 2003; Stewart & Williams 2005; Williams 2003), although the depth of discussion can be diluted by the on-line format (Boshoff 2005).

Both synchronous and asynchronous methods have the advantage of being able to create non-threatening environments in which participants can express their views. Face-to-face groups can be anxiety-provoking contexts in which participants may feel intimidated by more dominant participants, be reluctant to share information about themselves or express their opinions (Tates et al. 2009). In contrast, the anonymity and psychological distance afforded by the online focus group can stimulate group participation (Reid & Reid 2005), as it is less threatening to participants (Krueger & Casey 2000). This environment is more conducive to eliciting honest and thoughtful responses (Reid & Reid 2005), and may reduce bias towards making socially desirable responses (Tidwell & Walther 2002; Kam & Chismar 2006). In essence, the on-line environment enables

greater equality in participation than in traditional groups (Mann & Stewart 2000; Rhodes & Bowie 2003; Schneider et al. 2002). This is a feature of significance to the current study as it aims to gain data from participants that may feel intimidated in a group. For example, occupational therapists may be reluctant to express their opinions in the presence of more senior colleagues, who may be perceived as more knowledgeable. Similarly, laypeople may feel intimidated in the presence of professionals.

In summary, online focus groups have distinct advantages that are relevant to this study. Although depth of discussion may be diluted by the online format of a synchronous focus group, it is perceived to be the most practical and supportive environment for discussion of the emergent grounded theory. The next section of this chapter details the data collection and analysis procedures chosen for this second phase of the study.

4.3.1 Focus group sample size

In face-to-face focus groups, a sample of between six and eight participants is considered to have the greatest potential for comprising an effective group (Krueger & Casey 2000). However, on-line focus groups are more difficult to facilitate because participants cannot see each other, requiring facilitated turn taking in speaking (Fox et al. 2007). Therefore, a sample of six was sought for the current study, deemed adequate for gaining diversity of views. In anticipation that respondents may not be able to participate in the focus group due to unforeseen circumstances, seven people were invited to participate. Six participated: one occupational therapist in South Africa was unable to participate due to ill health. All participants agreed to take part after being informed about the study. Given the potential for technological problems, contingencies were planned and documented in the Participant Information sheet (Appendix K) i.e., those unable to take part have the opportunity to view and listen to the recording of the group and make their contributions in writing and/or in discussion with me over the telephone. Krueger (1994) has approved the use of what he terms mini-focus groups, which may include three (Morgan 1996), or four participants (Krueger 1994).

The number of focus groups that would be required was unknown at the outset. In the focus group, there was little disagreement regarding the emergent grounded theory. Concepts were further explored and refined during Stage Two of the study. I was satisfied that this addressed the issues raised in the focus group, rendering further focus groups unnecessary.

4.3.2 Focus group sampling approach

Focus groups consist of selected individuals who from personal experience are able to discuss and comment on the subject of the study (Powell et al. 1996). This relates to the concept of applicability, in which participants are selected because they have views, knowledge and opinions on the study's topic (Burrows & Kendall 1997; Richardson & Rabiee 2001). Therefore, the sampling approach for this study was purposive sampling, seeking participants who have what may be considered typical experience of the phenomena under study (Morse 1991). Within the purposive sample a range of variations is sought, therefore stratified purposive sampling was employed.

Reflecting the desired variations, there is a range of inclusion criteria as outlined below.

- Occupational therapist in South Africa or the UK, or member of the public in the UK who participated in Stage One of the study.

This is important to this study because a generated theory should be recognisable by the subjects of the study (Glaser 1978); a good fit being evident when the theory is perceived as clearly explaining what the individuals readily accept to be true in their social worlds (Charmaz 2006). Participants who had demonstrated ability to manage interviews confidently, and were contactable, were offered the opportunity to participate (contact details of members of the public were not required and not gained from all participants). Ability to engage confidently in interviews was considered important in order to manage the group interview situation. All respondents were included in the focus group.

- Occupational therapist that did not participate in Stage One.

This participant is important for determining whether the theory is plausible to another member of the social world of professional occupational therapy practice, and not merely phase one participants agreeing with aspects of the theory that they recognise from their accounts. An occupational therapist in the UK, who was known to be interested in the study, but unable to participate in Stage One, was approached and agreed to participate.

- A South African occupational therapist with expertise in the Theory of Creative Ability.

This participant is important for gauging the degree to which the definitions and explanations of effort and maximum effort fit with how these constructs are understood in the Theory of Creative Ability. This is important because although the theory generated from phase one will be a theory in its own right, the emergent definitions and explanation of effort and maximum effort are intended to contribute to the Theory of Creative Ability. Hardy (1974) states that constructs are defined and understood within the structure of the theory to which they are a contribution.

Therefore it is important to gain the views of an expert in the Theory of Creative Ability on whether the emergent theory fits, or is at odds with Theory of Creative Ability's theoretical framework. All experts in the Theory of Creative Ability are in South Africa, and of which there are a relatively small number. Many experts are known to me as friends or colleagues. In order to minimise the potential for bias, I approached an expert who did not know me well. That individual agreed to participate.

No new participants from the general public were sought, because it was assumed that participating in the study would be too difficult for new participants. Participants should be comfortable talking to the researcher and each other (Richardson & Rabiee 2001), and be prepared to engage fully in the discussion (Krueger 1994). However, this is unlikely to be the case for new participants from the general public. I anticipated that they might be overwhelmed by involvement in research that discusses complex information through a challenging research method, with people they do not know. Therefore, I am of the opinion that it is unlikely that newcomers to the study could adequately manage being part of this study.

4.3.3 Focus group data collection procedures

Prior to the group, participants received an e-mailed summary of the phase one grounded theory of effort, for consideration. This was provided to minimise the potential for participants to feel overwhelmed by the complexity of information for discussion during the focus group. Prior reading also gave them time to process the theory and formulate thoughts and questions about it. Participating in the online focus group required participants to use their own computers and an internet address provided by the researcher. A presentation of the theory on Power Point slides was viewed in real time and the ensuing discussion was heard via headphones. There were only three questions asked of participants at particular junctures of the presentation: does it fit? is it plausible? is it understandable? No other questions were deemed necessary.

Participants used their computer microphones to verbally participate in the discussion. The lack of visual cues in the online environment was partly compensated for by the use of symbols to help convey nuances in expression (Kenny 2005; Stewart & Williams 2005), i.e., thumb symbols to indicate agreement and disagreement with what was being said (Fig. 4-1).



Figure 4-1 Thumb symbols for participant communication of agreement and disagreement.

The focus group was visually and audio recorded using Adobe Connect, including a Power Point presentation on the theory and participants' use of symbols. This enabled a full record of the group to be captured for analysis. Respondents unable to participate in the live online focus group, received an internet link that allowed them to view and listen to the recording. I considered that potentially participants might not feel part of the group, but passively listen to the discussion. To prompt them to actively consider their own view on the theory being presented, they were sent a Word document guide to the recording that indicated when the researcher posed questions (Appendix L). At these junctures, participants were requested to pause the recording and consider their own responses, making notes in the guide of their views. Having done this, they could continue to play the recording and make additional notes on other participants' responses as relevant. The notes were posted to the researcher. Telephone contact was made with participants to give them the opportunity to engage with me in a discussion, and to clarify some of their written responses.

4.3.4 Focus group data analysis

As in any qualitative research, the analysis of focus group data should be congruent with the methodological approach chosen by the researcher, reflecting the study purpose and specific aims (Duggleby 2005). The procedures selected in the current study reflected the need for the data to 1) contribute to the grounded theory study, 2) capture the influence of group interaction on the data, and 3) identify participants' perceptions of the emergent theory's degree of fit. Therefore, I employed a three-pronged approach to focus group data analysis: grounded theory, a schema of analytical questions, and a matrix.

4.3.4.1 Grounded theory analysis

It was anticipated that the focus group discussions would generate data that contributes to phase one data. Subsequently, grounded theory data analysis procedures were employed to analyse the focus group data consistent with the theoretical framework of the study. In Grounded Theory Methodology, data can come from various sources, coded in the same way as interviews and observations (Corbin & Strauss 1990).

Data analysis took place immediately after the focus group. Memos were written to record analytical insights and interpretations. The recording of the group was reviewed the next day in order to transcribe discussions and aid analysis. As per Morrison-Beedy et al's (2001) recommendations for preparing focus group data for analysis, notes regarding participants' verbal

and non-verbal communication (use of symbols) were integrated into the transcript. A sample of how this data was recorded is presented in the findings (Chapter Six). The extent of concordance between each participant's verbal and nonverbal behaviors, and the consistency of comments by each group member were noted for analysis. This is in recognition that on their own, words can be misleading, but their meaning becomes evident when integrated with listening to the recording and field notes (Morrison-Beedy et al. 2001).

Data were coded using open and selective coding procedures described by Glaser (1978), and the constant comparative analysis method was employed, recognised as an acceptable method for the analysis of focus group data (Leech & Onwuegbuzie 2007, 2008). Participants' individual opinions on specific topics were compared with each other, noting to which group individuals belonged (i.e., South African or UK occupational therapists, or the public), in order to also compare groups. Some participants illustrated their point of view with examples of their experiences of effort, and this data were coded and compared with Stage One data. On completion of analysis, theoretical sampling of the literature was undertaken to explore new insights.

4.3.4.2 Schema of analytical questions

Group interaction is the key to the focus group method (Krueger 1994), therefore it is important to analyse the focus group in ways that take optimum advantage of the interaction between participants (Kitzinger 1995; Watson et al. 2006). Focus group data should reveal the group's content, dynamics, atmosphere and environment, because the group experience effects the data itself i.e., what is discussed and how it is discussed (Morrison & Beedy 2001). How participants interact is important for providing insights into how decisions and opinions are formed, influenced, challenged and changed (Watson et al. 2006). Therefore, to complement the constant comparative analysis of the focus group data, an adaptation of Stevens' (1996) schema of analytical questions was used to guide the analysis of the group interactions (Table 4-1). This took place the day after the focus group.

Questions in Stevens' (1996) schema were altered to better reflect the purpose of the study. For example, a question on how the group reached consensus was removed because this was not an aim of the study. However, the questions assisted with considering the degree of consensus and dissent on aspects of the emergent theory. Stevens' (1996) schema supported efforts to integrate group interaction with the constant comparative analysis, by drawing attention to the social context in which the data was generated (Watson et al. 2006).

Table 4-1 Adaptation of Stevens' (1996) schema of analytical questions

Qu. No.	Question
1.	What questions did participants ask?
2.	How did participants compare their experience with others?
3.	What did participants agree and disagree on?
4.	What was the range of communication forms used in the group?
5.	What are the controversies (and contradictions) within the group?
6.	How do participants interact with and influence each other?
7.	How were emotions expressed and handled?
8.	Was a particular member or viewpoint dominant or suppressed?
9.	What was the relationship between the researcher and the participants?

4.3.4.3 Matrix

For the purpose of establishing the degree of fit that the theory had for participants, in addition to the grounded theory analysis of participants' discussions, Onwuegbuzie et al's (2009) matrix for assessing level of consensus in focus group was used (Table 4-2). As also noted by Crabtree et al. (1993), Onwuegbuzie et al. (2009) suggest that a sense of consensus in the data might be indicative of group dynamics, providing little information about the varying views held by individual participants. Therefore, it is recommended that researchers delineate information about the proportion of members who appeared to be part of the consensus, and document statements and examples that suggest a dissenting view. In the current study, Onwuegbuzie et al.'s (2009) matrix was used to document areas of agreement and dissent, and how the group explained areas of consensus and disparity.

Table 4-2 Matrix for assessing level of consensus in focus groups (Onwuegbuzie et al. 2009, p. 8).

Focus group question	Member 1	Member 2	Member 3	Member 4	Member 5	Member 6
1						
2						
3						

The following notions can be entered in the cells:
A = Indicated agreement (i.e., verbal or nonverbal)
D = Indicated dissent (i.e., verbal or nonverbal)
SE = Provided significant statement or example suggesting agreement
SD = Provided significant statement or example suggesting dissent
NR = Did not indicate agreement or dissent (i.e., non-response)

CHAPTER FIVE

Ethics

5.1 Introduction

In Stage One of the current study, a number of issues arose that created tension between the ethical and methodological complexities of this research. These relate to the fact that the Stage One included patients, as vulnerable research participants. It was in relation to patient engagement in research that ethical and methodological complexities arose. These were managed through engagement in reflexivity, for the purpose of examining ethical practice during the research process. Thus, this chapter begins with a brief overview of the relevance of reflexivity to ethical practice. From this point of departure, the ethical issues that arose in this study are addressed according to three ethical principles that were particularly significant for guiding this study: autonomy, beneficence and non-maleficence.

5.2 Reflexivity and ethical practice

Reflexivity in research is a process of critical reflection both on the kind of knowledge produced from research, and how that knowledge is generated, thus in qualitative research, reflexivity is usually focused on the epistemological aspect of research for the purpose of ensuring rigour (Finlay 1998; Koch & Harrington 1998; Rice & Ezzy 1999). However, reflexivity is also considered to be a useful conceptual tool for understanding the research process as a whole (Urquhart 2013), engaging in continual critical scrutiny and interpretation beyond research methods and the data, to the participants, the context of the research and the researcher (Guillemin & Gillam 2004). Therefore, reflexivity enables the researcher to examine both the nature of ethics in qualitative research and how ethical practice in research can be achieved (Guillemin & Gillam 2004).
This is reflected in McGraw et al's (2000) description of reflexivity as "a process whereby researchers place themselves and their practices under scrutiny, acknowledging the ethical dilemmas that permeate the research process and impinge on the creation of knowledge" (p. 68). Throughout the course of this study, I engaged in reflexivity through the use of a reflexive diary to facilitate reflection and examination of decisions regarding the research process. There follows a description and discussion of the significant ethical issues that arose in this study, and how ethical principles were adhered to, beginning with the principle of autonomy.

5.3 The principle of autonomy: informed consent and confidentiality

The principle of autonomy is to respect participants' autonomy by recognising, considering and accommodating their independence and wishes if possible. Respect for autonomy involves respecting the right to privacy of information collected from study participants, and this was adhered to through maintaining confidentiality. All data gathered from participants was managed in accordance with the UK Data Protection Act (HMSO 1998), the UK being my country of residence and professional practice. Participants' names were not recorded beyond the consent forms, but replaced by pseudonyms or numerical codes in all records. Prior to commencing the focus group, ground rules were established regarding maintaining confidentiality within the group and not discussing content of the session outside of the group. An audio-recorded verbal agreement was gained from each participant. Participants had the option to identify themselves by their first name only, or a pseudonym.

All face-to-face interviews were undertaken in a private room. Recordings of all interviews including the focus group, and transcripts were securely stored on a computer with password protection, and only accessible by the researcher. Once transcribed, recordings of the interviews were destroyed. Participants consented to the study data being used for further research, therefore in accordance with the Health Professions Council of South Africa regulation of a maximum of 15 years, transcripts will be stored according to the UK Data Protection Act (Great Britain 1998) for 15 years or until no longer needed.

The Participant Information Sheets for occupational therapists (Appendix B), patients (Appendix C), members of the public (Appendix E), and for the focus group (Appendix K) uphold participant autonomy by providing full details of the study, thus providing the conditions required to give informed consent. Informed consent to participate in the study was obtained from all participants (Appendices B, C, E, K). Participation in the study was voluntary and participants could withdraw at any time. Participants were given the number of the Human Research Ethics Committee of the University of the Witwatersrand to voice any concerns of confidentiality and autonomy.

In preparation for recruiting the first sample of mental health patients, a great deal of consideration was given to the gaining of informed consent because of the vulnerability of the people making up this sample. Several factors increased their vulnerability: their status of patient, being a patient in a large mental healthcare institution, and the fact that the participants were predominantly black from disadvantaged and poor socio-economic areas. In this context, there was the potential for the power associated with my status of white, educated, healthcare

professional and researcher to make the patients feel powerless and unable to question the study or decline to take part. As a social scientist with considerable power as a researcher, I owed a duty of protection to these vulnerable people (Murphy et al. 1998). Therefore, I approached the gaining of consent with sensitivity to these potential factors, considering Cassell's (1979) conceptualisation of it as an endeavour to balance the unequal power relationship between the researcher and the researched.

As the macro context of research, healthcare settings inherently have unequal and hierarchical distribution of power (Murphy et al. 1998). This particularly relates to the medical model's paternalistic relationship between practitioner and patient. In this relationship the patient's right to self-determination may be superseded by what the practitioner, in an overtly superior hierarchical role to the patient (Bransford 2011), determines what is in the patient's best interest. In the UK, the out-of-favour medical model is increasingly being replaced by the patient-centred model (Stewart & Brown 2001), emphasising patient autonomy, informed consent, empowerment and self-determination. With this patient-centred model in mind, I approached the task of gaining informed consent from the sample of patients in South Africa. However, it had limited influence on the task, because most patients readily consented, quickly accepting my verbal, introductory explanation of the study. Although offered, many did not wish to read the Participant Information sheet and did not have any questions about the study, telling me that they understood what it entailed. However, I was concerned that some did not quite believe that the decision about taking part was genuinely theirs to make. Reflecting on this experience, I realised that the medical model approach to healthcare was firmly embedded at the hospital, I had the impression that in the patient role, some patients were succumbing to the power of professionals and therefore complied with the study. The likelihood of this being the case was increased in my opinion, by the occupational therapists at site A saying that *"they [patients] are used to research being done here",* saying this in front of patients prior to recruitment. If research was the norm at those sites, this could have increased the propensity for patients to agree to participate without questioning the study, or for them to feel that there is an expectation to take part in an apparently normal activity (Cook & Skinner 1995. I addressed this issue with the therapists to prevent this happening again.

In this situation I tried to redress the balance in power by encouraging patients to think through the study, I reinforced that the decision of whether or not to participate was theirs to make, and a decline to take part would have no negative impact on their care. To optimise participants' informed position about the study, in addition to gaining written consent, further explanation of the study was given prior to starting the interview. Patients had another opportunity to decline,

or give consent to participate. This strategy was in agreement with the view that gaining consent is not a single event but continuously negotiated jointly by the researcher and participants throughout the study (Miller & Bell 2012).

In addition to the status of patient, another factor that made participants vulnerable was compromised functional ability. I was bound by the Human Research Ethics Committee to adopt a prescribed Participant Information sheet template, which I was not permitted to alter. I thought that this sheet was too lengthy with too much detail to take in, particularly for those who did not speak English as a first language, or did not have good reading skills. Therefore, I also provided a simplified verbal explanation of the research to support patients in understanding the study. Nevertheless, the complexity of healthcare contexts means that it may be naïve to assume that all participants can be informed to the same degree, or know precisely what it is that they are consenting to (Johnson 1992). Furthermore, I recognised that some patients may be less sophisticated than others in raising questions about the study (Eisner 1991).

The potential for any or all of the aforementioned factors to impact upon the patients' ability to give informed consent and participate voluntarily in the study, focused my commitment to participant autonomy. As recommended by Eisner (1991), I raised questions with participants in support of participant autonomy. That is, I asked participants if they understood various aspects of the study, raising questions about details that I thought were important to consider. This was to support informed decision making about taking part, respecting the principle that informed consent should be knowledgeable (Satyanarayana Rao 2008). Such attention to autonomy is a significant factor in gaining truly informed consent, which cannot be limited to offering participants the option of refusing to participate at the recruitment stage (Lincoln & Guba 19889).

In the first interviews, it became apparent that the sample inclusion criteria of *able to speak English*, was too broad in terms of identifying a sample of patients with ability to effectively engage in interviews. I had relied upon the occupational therapists to identify patients that met the criteria, but they had not sufficiently considered the functional ability required to engage in interviews about the topic. Subsequently, several recruited patients were later found unable to speak English well enough to adequately participate in interviews. The therapists' assessment of suitability for the study appeared to be based on the patient's English language skills for daily living, which does not require the same language skills as the interview. Due to the brevity of interaction that I had with many patients during the recruitment process, I did not discover that their language skills were inadequate until the interview had started. I then had to either shorten,

or simplify the interview. I discussed the issue with the therapists. Subsequently, the recruitment process ensured that patients had adequate English language skills by having a detailed discussion about their understanding of the study before gaining signed consent.

Lincoln and Guba (1989) argue that with regards to ethical decision-making, the moral stance of the researcher ultimately determines decisions. Reflecting on the recruitment process for the first sample, I realised that the measures in place for gaining informed consent and voluntary participation, were not adequately sensitive to the researcher-participant power dynamic in the hospital setting. I felt strongly that this was unacceptable. Subsequently, later recruitment strategies were prolonged, more discursive, encouraging patients to view the Participant Information sheet and take time to think about the study even when they said this was unnecessary.

With regards to data collection, commonly discussed ethical issues in qualitative research relate to covert observation and informed consent (Murphy et al. 1998). For example, it is widely recognised that gaining consent is problematic in grounded theory research, because it takes place in natural settings where it is not always possible to control who enters the field of observation (Murphy & Dingwall 2003), or to inform everyone that research is taking place. Subsequently, there is the practical problem of how to inform and obtain consent from everyone who might enter into the field of observation. In this study, the size of the setting meant that there was a large number of ward staff accustomed to sending patients to the occupational therapy department for activity sessions. Also, a large number of patients were used to attending particular sessions. I attempted to set the boundaries of the field of observation by agreeing with the occupational therapists the patients who would be suitable to invite into the study, who would be attending an observed occupational therapy session, and where this would take place. However, on three occasions at Site A (Table 3-1), additional patients were sent to sessions by ward nurses who were either unaware of the closed nature of the session, or had not adhered to the instructions not to send additional patients. On these occasions, a decision had to be made in the moment regarding how to manage the situation. The occupational therapist was of the view that it was in the patients' interest to attend rather than be returned to the ward. Therefore, having confirmed that the additional patients had capacity to give informed consent to be observed, the session was delayed in order to seek consent from them. However, although patients met the criteria of *able to speak English*, their command of the English language was not always sufficient to equip them to fully understand the study information, even when I explained it in a simplified way. Therefore, the therapists explained the study in Afrikaans. For this to be done

properly was a lengthy exercise, significantly delaying the session. This caused tension between the principle of autonomy for informed consent, and the principle of non-maleficence (do no harm), as patients' therapy was being impinged upon. Subsequently, it was agreed with the therapists that I would only observe sessions at which only a delineated group of patients were expected and permitted to attend.

Gaining informed consent is not limited to a single occurrence at the recruitment stage, but should be regarded as a recurrent process (Merrell & Williams 1994). Participant autonomy was also respected in seeking consent to audio record interviews with participants. A digital recorder integrated into a pen was used in association with a book that recorded notes that could be uploaded onto a computer. The decision to use a pen device was to eliminate the problem of participants being distracted, or made anxious by the presence an obtrusive recording device. However, this could mean that participants lacked awareness that I was recording the interviews, therefore I reminded them of this prior to starting each interview and gained verbal consent in addition to the signed consent during recruitment.

At the initial stage of data collection, the intention was to also video record patients doing group activities. Strategies to protect privacy and confidentiality were explained to participants, as detailed in the Participant Information Sheets. When using video recording, it is important to maintain the autonomy of participants (Caldwell 2005), therefore an additional explanation of its use was provided before the event to be recorded and participants were given the opportunity to refuse to be videoed.

On arriving at the first site for data collection (mental healthcare hospital, South Africa), I was surprised to be told by the head of the occupational therapy department that patients had already been informed that I planned to use a video camera. Many patients had misunderstood its purpose, thinking they were going to be on television. Therefore, although I had clearly explained its purpose during the process of gaining informed consent, I had to be aware that when patients saw the camera in the sessions, they may still misunderstand its purpose and their behaviour could change in response to it. I made a considered decision therefore to introduce the camera for the first time at a session with four patients who I had come to know; who had a good understanding of the research process, and were unlikely to be affected by the camera. Furthermore, I was confident that the session was closed to entry, therefore others would not wonder into the field without having given consent to be videoed, known to be a practical and ethical issue when recording in field research. As stated in Chapter Three (Stage One Methods),

this was the only time that the video recorder was used, because I did not think recording the data was useful. Therefore, the recording was destroyed. This decision is evaluated in Chapter Eleven (Contributions and Recommendations).

5.4 The principle of beneficence

The principle of beneficence refers to the obligation to act in ways that benefit other people, or at least in ways that do not harm them. This principle guided my decision to intervene during an observed therapy session. During the session, which involved patients playing a table top game in teams, the occupational therapist left and handed the session over to an occupational therapy assistant (OTA). However, the OTA was unable to facilitate the session effectively and the patients were confused regarding the game. As the session continued, the OTA's attempts to explain the game resulted in the lower functioning patients becoming frustrated, whilst higher functioning patients became increasingly annoyed. One patient left the session, expressing his frustration. I was faced with the dilemma of whether to intervene, or maintain the non-participant researcher role.

In fieldwork, the researcher has an ethical and moral responsibility to the research participants first, the study second, and researchers last (Punch 1994). The overriding factor in my research is that I am bound by the Code of Ethics and Professional Conduct (College of Occupational Therapists 2010), with an emphasis on the protection of patients and promoting their interests. Therefore I decided to suspend the researcher role and intervene as a clinician to facilitate the session, paying closest attention to the lower functioning patients who I perceived to be the most distressed by the confusion in the session. At the end of the session I reflected upon the experience and how to manage it, deciding to adhere to a professional responsibility to report poor practice, and bring it to the attention of the Head of Department.

5.5 The principle of non-maleficence

The principle of non-maleficence is a directive to do no harm. In qualitative research there is acknowledgement that there psychological risks in interviewing (Robson 2002), particularly regarding participant stress during interviews (Punch 1994). Regarding therapists, I considered the potential for interviews to generate feelings of professional inadequacy if they were unclear about how they identify effort in patients. For patients, there was the possibility that they could experience anxiety or upset during the interview, should the issue of effort and activity participation evoke an emotional response. Essentially, in qualitative research, researchers are

unable to know whether issues will emerge, or what these might be (Johnson & Plant 1996). To manage this issue, I was to be open about this fact with participants, and told them as much about the study as was known at the recruitment stage.

With regards to interviewing patients, I was mindful that they were recovering from illness or injury, and that I did not know anything about their diagnoses, or the boundaries of their capabilities. Interviews usually took place immediately after an observed therapy session, but on three occasions I decided not to interview straight away, because the participant appeared fatigued. I judged that interviewing would have been too difficult or detrimental to their health or well-being. In these instances the interview took place within 24 hours of the session.

A few patients appeared to find the interview a difficult task due to the challenge of explaining the abstract concept of effort, or they had discomfort or disturbance caused by illness. Additionally, for some English was not their first language. A fundamental requirement for reducing the risk of harm in qualitative research is to ensure that it is conducted by researchers with sufficient expertise (Richards & Schwartz 2002), and this came to the fore on these occasions. Drawing on my extensive clinical experience, I adjusted interview questions to minimise the potential for participants to become frustrated or distressed, and to enable participants to engage with the general topic. Being flexible in approach was responsive to participants' abilities and respected their dignity and autonomy through adherence to the principle of non-maleficence. One patient who had recently had a stroke, became distressed during the interview, triggered by talking about the effort that it took to perform activity that had previously been so easy. Again, my experience enabled me to handle the situation sensitively, and I brought the interview to a close in the participant's best interest.
A de-brief session was offered to all participants after the interview to address any participant concerns, of which there were none.

With respect to observing therapy sessions, I was sensitive to the potential for reactance (Stangor 2003) i.e., the influence of the observation process on those being observed (Wallace 2005). Most of the time I did not seem to be noticed much by patients, probably aided by the fact that they were usually engrossed in activity participation. However, during the first observation of an occupational therapy session, the therapist appeared to alter her behaviour because she was anxious about doing the therapy correctly in front of me, a more experienced therapist. There was nothing to suggest that her altered behaviour affected the delivery of the therapy session, or the responses of the patients, but it may have affected her focus on the activity participation of

patients, which we later discussed. Having reassured her of my role as a researcher rather than a critical colleague, she was more self-assured in practice.

A fundamental requirement for reducing the risk of harm in qualitative research is to ensure that the study is properly designed (Richards & Schwartz 2002). Ethical approval was gained for this study from the Human Research Ethics Committee of the University of the Witwatersrand (Appendix M). The approval was also reviewed and supported by London South Bank University ethics committee in respect of my employment at this institution. Local Ethics Committee approval in the UK was not required.

In conclusion, this grounded theory field research, Stage One of which was conducted in complex, unfamiliar settings with vulnerable participants, posed many ethical challenges. The breadth and depth of ethical consideration presented in this chapter, particularly in relation to the ethics involved in researching patients, reflects my morals regarding the rights of people, and the importance of protecting vulnerable people. The strength of my feeling is partly a product of being a healthcare professional, with empathy for patients and respect for the practice of colleagues. Engaging in reflexivity enabled me to be sensitive to the fact that each stage of the research endeavour may potentially be a source of ethical problems (Cohen et al. 2000). Through reflexive practice, I was better placed to respond to ethical and methodological issues in a way that was ethically proper. This chapter indicates that research requires an on-going, consistent examination of its ethics. The impact that managing the ethics of this study had on me personally, is discussed in Chapter Eleven (Contributions and Recommendations).

CHAPTER SIX

Findings of the study

6.1 Introduction

This chapter presents the findings of stages one and two of the current study, integrating findings of the focus group.

The primary purpose of this study was to discover a theory of the relation of human effort and maximum effort to activity participation, following the principles of classic grounded theory (Glaser & Strauss 1967; Glaser 1978, 1998, 2001, 2003, 2005) for substantive theory. The Stage One and Two findings contribute a theory of effort, which as per the aims of this study describes and explains effort and maximum effort; the conditions in which effort occurs, and its consequences.

This chapter reports on the sample data collected and analysed. This is followed by reporting the findings in numbered sections. **Section 1: Effort** presents what effort is, as it was discovered from observations and commonalities in participants' use of terms to describe effort. **Section 2: Effort in demanding activity participation** presents the characteristic of activity participation that requires effort, determined by major factors in the person-activity-environment dynamic. **Section 3: The decision-making process** presents the decision-making process that leads to a decision to exert effort. The process is sparked by the need to relate and motivation for activity participation, and is comprised of two sub-processes: weighing-up and getting motivated. **Section 4: Awareness and decision-making** presents how awareness influences effort. The process that can lead to effort in the absence of effort is then described, emerging out of data on occupational therapy. **Section 5: Decision response with an attitudinal response** presents how the decision at the end of the decision-making process involves the person's attitude towards the activity participation. This is reflected in the quantity and quality of effort exerted in activity participation. **Section 6: Signs of effort** presents what effort looks like when people are doing activity, and how signs of effort reflect the quantity and quality dimensions of effort. **Section 7: Zones of effort** presents the concept of the comfort zone as activity participation for which there is no effort, and demarcates the boundary with effort. This section presents zones of effort that reflect the quantity and quality of effort i.e., no effort in the comfort zone, minimal effort, maximum effort, all of which are

defined. **Section 8: Focus group findings,** presents participants' responses to the emergent theory, identifying that it had plausibility and fit.

Sections 1 to 6 present raw data supporting the emergent themes and theory, grounding the emergent theory to the actual interview data. Quotations from the raw data are labelled with a pseudonym for the participant. When relevant, the sections end with a summary of the contribution of other data to the emerging theory.

6.2 The sample data

Discovering effort began by observing patients and occupational therapists during occupational therapy sessions in South Africa, followed by interviews with them. Interviews were then undertaken with occupational therapists in the UK, and a wide variety of people as members of the public in the UK. The amount of data in interviews minutes, average interview length and number of interviews is outlined in Table 6-1. The minimum number of interviews with participants was one. The total sample and data collection methods used in Stage One are presented in Table 6-2. The contexts in which observations were made are outlined in Appendix A. Stage Two (focus group) sample and findings are presented in Part 2 of this chapter.

Table 6-1 Interviews in minutes (Stage One, phases 1 & 2)

Sample group (Stage One, phases 1 & 2)	Total interviews in minutes	Average interview length in minutes	Average number of interviews per person
Occupational therapists (cohorts 1 & 2)	910	60	2
Patients (cohort 1)	250	30	3
Members of the public (cohort 3)	1315	60	2
TOTAL	2475		

Table 6-2 The sample and data collection methods (Stage One, phases 1 & 2)

Sample group	Number	Data collection method
Occupational therapists (South Africa) (cohort 1)	11	Observation and interview
Patients (cohort 1)	29	Observation and interview
Occupational therapists (UK) (cohort 2)	7	Interview
General public:(cohort 3)		
swimmer	3	Interview
runner	3	Interview
personal trainer	3	Interview
older person (retired lady)	3	Interview
housewife	3	Interview
church minister	3	Interview
gravedigger	3	Interview
road worker	3	Interview

6.3 Section one: Effort

To discover what effort is and when it occurs, data were collected on when there was effort and also when there was no effort; the assumption being that in the latter would be descriptions of aspects of effort that are missing i.e., indicators of effort. Data on *no effort* was also important for identifying the conditions in which no effort changes to effort i.e., the conditions of effort. For these reasons, all participants were asked:

- How do you know there is effort?
- How can you tell that someone isn't putting in effort?
- When is there no effort?
- Occupational therapists were not asked about their own experience of effort because they were theoretically sampled for best explaining what effort looks like. Patients and members of the general public were also asked the following questions:
- What is the difference in feelings of effort and no effort?
- What does effort feel like?

This section sets out comparative data from participants across the sample groups regarding what effort is, in terms that describe effort. Participants' accounts of their subjective experience of effort and how it was observable in others, together with my observations of activity participation led to the discovery of two main properties of effort: *putting in* and *trying*. Combined, they described effort as the expression of one's motivation in the exertion of one's resources.

6.3.1 Effort: putting in

Every participant in the study described effort as occurring in the act of doing something i.e., in activity participation. The doing of activities had particular requirements depending upon what the activity was. For example, an art activity could require mixing paint; gardening could require mowing the lawn and swimming could require swimming the length of the pool to a certain distance. However, effort was not necessarily experienced when doing an activity, because activity could be done without effort.

Activity participation for which there was no effort was activity that they could easily, or already do:

> Things used to doing doesn’t take effort (Vince, patient, cohort 1).
> If you do something often enough and it's a habit, then there's no effort in doing it (Kate, OT, cohort 2).

> You know how to do it and you get on and do it, so therefore there isn't any effort involved (Martin, gravedigger, cohort 3).
> Doing these things that you've already mastered, don't take effort from you (Rachel, patient, cohort 1).
> No effort is doing something that is easy to do (Jill, housewife, cohort 3).

In contrast, effort was experienced when participants were actively engaged in an activity that was experienced as demanding or challenging in some way, mentally and/or physically. In meeting the demands or challenges of the activity, participants put forward something of themselves mentally and/or physically. This was frequently expressed as "putting in" something as illustrated in the following responses to my question "What is effort?":

> It is the power that we put in; the power, thinking and the courage to put in. (Isaac, patient, cohort 1).
> Effort is energy, how much energy you're putting into the activity. (Jenny, OT, cohort 1).
> it is power that you put in (Tim, patient, cohort 1)
> Effort is the courage to put in. (Carl, patient, cohort 1).
> It is putting in your enthusiasm. (Ali, patient, cohort 1).
> Effort is putting in your whole strength. (Ethan, patient, cohort 1)
> Putting in your resources. (Barbara, older person, cohort 3).

What I found interesting in these expressions was that there are two aspects to their expression of putting-in: 'putting' as an action, plus what it is that is put in. To address first the action of *putting in*, this could be interpreted simply as the action of moving something from one location into another. However, from my observations it was evident that putting in effort was more than some kind of transaction or movement of something. Putting *in* was the action of meeting the activity *with* the self i.e., they put *themselves into* the activity. In so doing, through effort participants connected with and to the activity. In contrast, activity participation that did not require effort was spoken of in a way that suggested more detachment. For example:

> ...doing the activity can take me out of myself and it goes by without me realising it, and then suddenly, "*oh, I enjoyed that"* and it didn't feel as though it took much effort at all (Mitch, church minister, cohort 3).

The experience of doing something effortlessly, almost without awareness contrasts markedly to effortful activity participation, which was experienced as a conscious, active putting in of oneself into the activity. As a sample group, the church ministers expressed this as the *giving* of oneself to activity participation. For example:

> Effort? Taking a big funeral because it's about the management of people's grief - absorbing it but also giving something out yourself (Matthew, church minister, cohort 3)
> Giving away something of ourselves to others (Jake, church minister, cohort 3).

In describing effort as giving, there was similarity with putting in, because giving also expresses meeting activity with the self.

The second aspect of putting in as a description of effort that I explored, was what is put in, or given. Whether participants described effort as putting in or giving, participants across the samples included the mention of the self:

> Putting in yourself into what you're doing (Hannah, housewife, cohort 3).
> Give yourself to the moment (Jake, church minister, cohort 3).
> For the church ministers, what was given out, was themselves; they gave themselves to others including God, in order to be present in the moment and attentive to the needs of others and God's will:
> There's an effort in being present in a situation. There's a difference in being physically in a room but actually being present in the reality of what is going on. It is different and requires effort to engage in the moment - to give yourself to it (Jake, church minister, cohort 3).

I took *yourself* to mean the self physically and mentally in terms of physical and mental abilities, functions or resources required for doing what one is doing at the time. Several participants made the point that there are two types of effort: mental effort and physical effort. The physical and mental aspects of human beings were also mentioned in descriptions of effort e.g.,, putting in energy, power, strength and thinking. In theoretical memos, I considered whether there might be other dimensions to effort such as spiritual effort. This prompted a decision to recruit a sample of church ministers as people of religious faith to participate in the study. In recognition of the fact that spirituality is not necessarily to do with religious faith, members of the public were also asked about spiritual effort. In the interviews, the church ministers' expression of effort as *"Give yourself*

to the moment" sounded like it may involve more than the giving of mental and physical resources and I explored this with them. However, they perceived that it was difficult to distinguish spiritual effort from mental effort because spiritual activities such as prayer, writing a sermon and being attentive to the needs of others, required mental effort:

> ...In fact spiritual effort is not at all dissimilar to mental effort, as much as it requires concentration, focus and engagement (Jake, church minister, cohort 3).

Members of the public did not experience their spiritual activities as effortful, therefore there were no data to suggest that effort was experienced in dimensions other than the putting in of one's physical and mental resources.

An aspect of mental resources that emerged from the data was motivation, discovered from seeking to identify the antecedent to, and conditions of effort. In my observations and interviews, it was evident that when participants were motivated to do something, they put effort into it and less so when not motivated. In interviews, participants also spontaneously mentioned motivation as being closely related to effort:

> Effort and motivation are very closely linked because if you haven't got much motivation, you're not going to put in much effort (Sarah, OT, cohort 2).
> I don't make the effort unless I'm motivated, so motivation and effort are very similar (Jake, church minister, cohort 3).

Initially I thought that motivation was only the antecedent to effort, but it emerged that motivation was what participants were putting into their activity participation as effort:

> There are two types [of effort]: physical and mental amount of motivation - the amount that you have to put into something and it is sparked off with motivation, a similar concept. You have to be motivated to do something and to engage, or do whatever it is, but you also have the physical ability to endure the group and to participate and to do it to the best of your ability if you can - and the mental side of it, wanting to do it and being able to endure whatever it is you're doing in that amount of time (Amy, OT, cohort 2).

Amy described motivation as both the antecedent to effort and what is put into doing something. This was consistently found in this study. Furthermore, data suggested that motivation is not only

an aspect of mental effort, but drives effort and is inseparable from it. The terms 'putting in' and 'giving' suggest that motivation is linked to effort because they do not suggest actions that are automatic or that one is unaware of, but intentional actions. On revisiting the explanations of effort previously presented in this section (re-presented below), I could see that in describing effort, participants are describing motivation:

> It is the power that we put in; the power, thinking and the courage to put in. (Isaac, patient, cohort 3).
> Effort is energy, how much energy you're putting into the activity. (Jenny, OT, cohort 2).
> it is power that you put in. (Tim, patient, cohort 1)
> Effort is the courage to put in. (Carl, patient, cohort 1).
> It is putting in your enthusiasm. (Ali, patient, cohort 1).
> Effort is putting in your whole strength. (Ethan, patient, cohort 1).
> Putting in your resources. (Barbara, older person, cohort 3).

Motivation is evident in these descriptions in several ways. The putting-in of courage suggests doing something that is difficult, requiring will. Motivation is also suggested in the mention of enthusiasm, which is associated with liking, or a wanting for something as a motivating factor, as presented in section 6.5.2. The link between motivation and effort was also evident when participants were asked to explain effort without using the term effort. Common explanations and definitions of effort included effort as "the motivation to do something" or something similar:

> If you broke it [effort] down, it's whether you want to make a good job of something or not, and whether you want to or have the ability to - that's why it links with motivation. (Simone, runner, cohort 3).
> Putting the effort in is how much drive you have within yourself. (Ali, patient, cohort 1).
> Effort is the amount of energy and drive you put into something. (David, gravedigger, cohort 3).

The term drive suggested force. This fitted with *putting-in yourself* or resources, which suggested moving part of the self. Interestingly, participants mentioned an amount or *how much* drive one has, suggesting that whether or not there is effort is dependent upon how much motivation there is.

6.3.2 Effort: trying

In addition to putting-in, several other terms were used to describe effort including trying:

> [when training as athletes] we put full effort in and tried to get movements fluid. (Sam, personal trainer, cohort 3).
> Effort was trying to be still and focused and attentive and concentrated. (Mitch, church minister, cohort 3).
> [in reference to a patient in an OT session] there was effort in her trying to do the normal things she's always done. (Amy, OT, cohort 2).
> When you try harder because you want to achieve something; that's what I call effort (Barbara, older person, cohort 3).

Trying communicated active engagement in activity, in the pursuit of a goal. Therefore, trying as a description of effort, associated effort with motivation, which is goal directed behaviour (Deci & Ryan 2000). Furthermore, motivation was evident in my observations. In my field notes and theoretical memos, I used the term trying frequently to describe what I observed to be effort in the actions of participants, particularly when they were driven by wanting to do something i.e., were motivated.

In trying, participants were aiming to be able to do something other or more than what they could already do. In this respect, effort described as trying was subjectively experienced by many participants as a stretch, strain, or pushing the self in order to achieve something:

> Effort means pushing myself.... It was a lot of effort to do that race, to keep my pace up, to try - my aim was to do better than I did last time and I really had to push myself to do that (Melissa, runner, cohort 3).
> It's [effort] to do with pushing oneself, whether concentrating or joining in and participating or doing something carefully; it's about trying to succeed in some way in what you're doing. Not just half-heartedly doing it (Sally, OT, cohort 2).
> It's hard work [activity requiring effort], it's a strain but without trying, without that strain I won't succeed (Caron, patient, cohort 1).
> Putting in effort, - to try, I try really hard and really stretch myself so I can beat my time (Arnold, swimmer, cohort 3).

Descriptions of effort as pushing, straining or stretching appeared frequently in the interview data, becoming open codes. Theoretical memos noted that these terms expressed force and exertion.

On closer analysis of the context in which these terms were used, it became evident that they were particularly used in association with the term 'trying', as illustrated in the previous quotes. This association clarified a quality of trying that I had observed but found difficult to describe in field notes and memos. That is, that trying is exertion of effort.

Many participants described effort as pushing, straining or stretching themselves when they were aiming to bring about change for themselves. The term stretching particularly describes something being altered, and was used by many patients to describe the feeling of effort for the purpose of furthering themselves i.e., becoming better in some way. Jerry talked about the many years that he had wasted as a patient in a forensic service because he had not been willing to put effort into addressing his problems. As a result, he perceived that he had not progressed. For Jerry, effort was to try to bring about change in himself:

> 11 years I've been here. I didn't put in enough effort and wasted time. I didn't further myself. Now effort is work - it's doing rehab. Rehab is a lot of effort - to try and work my best. I took LSD when I was younger and I have an urge to clean - I'm trying to improve that. I don't like being around these people. Some of them are the way that I used to be and it's tedious. I want to try to get on - I have to try and get myself right. I have to try - to stretch myself. So, what is effort? It's stretching myself, furthering myself. (Jerry, patient, cohort 1).

Related to trying, the terms applying yourself and using all of your resources were also used to describe effort. These terms suggested an intentional (motivated) employment of resources. Through comparing these descriptions of effort with my observations of participants doing activity, applying yourself and using all of your resources were identified as properties of trying. Through comparing data across the sample, it became apparent that trying, applying self and putting in, were particularly emphasised by the sample of occupational therapists. As a focus of therapy, the occupational therapists wanted to see patients putting themselves into the activity, trying and applying themselves in activity, so that they would achieve their goals and bring about change. In talking about effort that they see in patients, they made statements such as:

> In the long run he'll see - the more effort you put into something, the more you'll get out of it. (Jenny, OT, cohort 1).
> The more you work on something, you'll see the results will be bigger. (Vanessa, OT, cohort 2).
> Putting effort into achieving something (Kate, OT, cohort 2).

As for *putting-in*, trying was associated with motivation. Effort as *trying* was much more evident when participants appeared motivated than when not motivated. In the following quote, Samba, an athletics personal trainer, suggests the link between effort, trying and motivation in an account of athletes' performance during running training at an athletics track:

> They try their best to adjust their posture and you know that they are really trying hard - that's the effort bit. But when you know they can do it and you watch them just going around and then not really trying their best, it's then that you know they are not putting in effort; there isn't the right intent. (Samba, personal trainer, cohort 3).

In this quote, effort is seen in trying to do something (adjust posture). When there was no trying, Samba perceived this as due to a lack of motivation (intent). One could suggest that the absence of trying in the athletes who were "just going around", may not have been due to a lack of effort and motivation, but due to a lack of physical ability i.e., physically unable to adjust their posture. However, Samba made an important distinction between when there is no effort due to a lack of motivation and no effort due to physical incapacity. That is, whether or not someone is trying, can be gauged from knowledge of what the person is capable of: *"you know they can do it".* When participants had the physical capacity to do something but did not try, the lack of trying was due to a lack of effort in terms of motivation.

A key to determining whether or not there was effort was knowing or having a sense of what the individual had the capacity to do, including how motivated he was. This was evidenced in how much they tried in activity participation.

6.3.3 Contribution of other data

Participants' mention of drive and motivation led me to question what the difference is between these constructs. Whilst reading the literature, I was surprised to find a link between motivation and energy, possibly linking them both to effort. In the literature, energy in activity participation has been strongly correlated to being motivated. Renowned researchers in motivation, Ryan and Deci (2000) state that motivation concerns energy because being energised toward an end goal is the state of being motivated. Motivation has been found to be characterised by directed energy, being energetic, vigorous (Purcell 1982; Deci 1992), enhanced performance, persistence and vitality (Deci & Ryan 2000); vitality being "the experience of having energy available to one's self" (Ryan & Frederick, 1997, p. 2). These descriptions of how motivation is characterised or manifests in activity participation resonated with participants' descriptions of effort as putting in power and

energy. I reviewed participants' descriptions of effort, seeing the link between motivation, energy and effort.

6.4 Section two: Effort in demanding activity participation

Objectives of this study included describing and explaining the conditions under which effort and maximum effort occur, and how the environment influences effort and maximum effort for activity participation. This section sets out data regarding what is necessary for effort to occur i.e., the conditions for effort. This study found that effort occurs when the relation between a person, activity and the environment is demanding on an individual's physical and mental resources, including motivation. I begin by presenting data on what are challenges and demands in activity participation, leading to raw data that illustrates how the manifestation of effort differs when there are greater or lesser demands. This leads to a graphic representation of the conditions of effort as the moment in activity participation when one meets the challenges of activity participation.

6.4.1 Demands and challenges

All participants described experiencing effort when activity participation was demanding or challenging. What made activity participation demanding was the mismatch between the abilities required to do the activity, and the abilities that the participant had, or perceived he had. That is, activity participation that required motivation, mental and/or physical resources, skills or abilities that participants did not yet have, or were not readily available but had to be exerted. Therapist participants spoke of activity as demanding or requiring something of patients:

> When there's opportunity for them to grow [through doing activity], it's very demanding (Pauline, OT, cohort 1).
>
> The amount of concentration that it [the activity] demanded, was a lot for him. (Kate, OT, cohort 2).
>
> The activity required him to work neatly and accurately and make decisions and problem-solve if there's a mistake; that required effort. (Gemma, OT, cohort 1).
>
> In this activity, there is the requirement that the patient works very accurately otherwise it [the model] will not fit together right. (Jenny, OT, cohort 1).

Patient participants also described demands of activities and that these required effort. In the following extract, a participant recounts the challenge in having the skills to roll paper around a toothpick to create a paper bead:

> Getting the paper started on the toothpick was fiddly, it was hard to get it started. I had to try three times.....then rolling it - you have to roll it right. It was [rolled] too tight and I couldn't get it off [the toothpick], so I had to do another one, not tight - I had to get it right. It took a lot of concentration and being careful. That took a lot of effort for me. (Tim, patient, cohort 1).

In the doing of activity, there were also implicit and explicit socially and culturally defined expectations and standards regarding how an activity should be undertaken i.e., neatly, quickly. accurately. In the extract above, standards are evident in the mention of rolling and getting it right; being careful so that the bead was fit for purpose. Other demands included the social environment which demanded skills for communicating and interacting with people:

> Communicating with others takes a lot of effort. It's difficult enough to do the game, but doing it with others makes it harder - I have to work hard at that. Accepting them when I don't feel sociable is a lot of effort (Noreen, older person, cohort 3).
> The participants who were gravediggers, road workers and sports people talked a lot about how the physical environment placed demands. For example:
> Usually I don't find the physical nature an effort - I'm used to it and I'm pretty fit. But lately there has been so much rain. The ground was like quick sand and so I was losing my boots and I had to get my foot out of the boot and dig the boot out. It's something that adds much more work to your day, it takes so much effort. (David, gravedigger, cohort 3).

As illustrated in the extract above, the environment was an unpredictable aspect of activity participation, changes in which could unexpectedly create demands on participants' activity participation. However, what was demanding for one participant was not necessarily demanding for another. The change in the weather (above) may not have presented challenges for another participant. Whether or not activity and/or the environment were demanding, depended upon the physical and mental state of the individual participant. The therapist participants were acutely aware of how changes in patients, the activity or the environment could alter, whether or not activity participation was demanding:

> The environment was very noisy - it was very demanding on his attention span. (Kim, OT, cohort 3).
>
> If they're [patients] very distractible, it's going to be more difficult for them to put in effort that the activity requires. (Keith, OT, cohort 3).

Demands were always in relation to the motivation and abilities of the individual. Therefore, changes in the person's motivation and ability changed the experience of activity participation, from that which was usually/previously done without much effort, to being more effortful due to a decrease in motivation and/or ability. This dynamic was recognised by the occupational therapists in the study:

> What they [patients] are capable of on a day-to-day basis fluctuates, there is fluctuating effort depending on how they are that day (Sally, OT, cohort 2).
>
> ... you have to consider what would be effortful today. Whereas last week you could have asked them [patients] to do XYZ, today you won't because their knees are hurting so just do X - that's the right amount of effort for that day. (Rachel, OT, cohort 1).

Patients' accounts of what had been effortful in therapy sessions frequently matched what the therapists perceived to be demanding in the session. For example, regarding a group session that Jenny facilitated in which teams played each other at a word game, there were inherent cognitive demands of the game:

> It [word game] demands good concentration, memory and vocabulary because they must find as many words as possible in the time. (Jenny, OT, cohort 1).

These inherent demands of the activity were experienced as demanding to Vince, who spoke of the game as effortful because he lacked knowledge of words, making it difficult:

> Me: What took effort in the session?
>
> Vince: Knowing the meaning of things was difficult. You have to pick a card [with a word on it] and sometimes it has difficult words- the explanations are difficult. I can't understand the different terms. It was difficult for me. (Vince, patient, cohort 1).

Similar to the example above, there were many participant accounts of activity being challenging due to not having adequate skills to do the activity readily. These activities required participants

to develop new knowledge or skills, therefore their energy and resources were being drawn upon as they exerted effort. This was particularly evident in relation to activities that participants had not done before, evoking a degree of anxiety or stress.

There was not only effort in the doing of activity, but also in being deprived of activity at times when participants really wanted to do something. Several patients talked about the effort of not having anything to do at a time when they really wanted to do something. In these instances, having to manage the frustration or boredom was challenging, and was just as effortful as actively doing challenging activity. Some patients reported finding the lack of activity on the ward effortful. For example, in one of the mental health settings, Ali found that sitting on the ward took effort because he found it boring and he was lonely. On another ward, patients were made to sleep for two hours every afternoon, which felt effortful to Linda because she was keen to do something to get well enough to get home; she felt like her life was passing her by.

In these examples, what felt demanding for participants was not having their needs met; not being satisfied motivationally. This was also evident when participants had to do something they were not motivated for, because it was not enjoyable or satisfying, or the lack of challenge in the activity made it tedious, monotonous or boring:

> Mentally, board games [are effortful]; I've never liked them. I've found them boring and they take a lot of effort. (Jim, patient, cohort 1).
>
> I don't really like going to the coffee morning, it's not what I would call stimulating conversation in fact it can be rather tedious, and I find that takes a lot of effort. (Niamh, older person, cohort 3).
>
> Having to do the gardening - it's not my kind of thing at all, I'd rather watch programmes about gardening and even then I can take it or leave it. Having to do it - oh [sigh], what an effort that is. (Hannah, housewife, cohort 3).
>
> Talking with members of the congregation about the small things - they have curiosity but about the small details of daily church life: stained glass windows and marrows rather than the honest doubts such as suffering. Just occasionally I have an honest conversation with someone but in the main it's about things that really don't hold meaning or importance for me. Having to engage in these conversations - that's frustrating and draining...that's an effortful side of what I do. (Matthew, church minister, cohort 3).

Hence, effort could be experienced when activity participation was perceived as positive, and effort could also be experienced as negative when activity participation was perceived as negative (tedious, boring, being inactive, no meaning).

The data presented thus far in this section illustrate that it was the interplay between the person (physical, mental, motivation), activity and the environment that made activity participation feel effortful or not. To illustrate this further, data follows on two male patient participants who took part in the same group collage session. The purpose of the activity was to work in a group to create a team collage that depicted its team members. Each person in the group was asked to represent themselves in the collage by expressing themselves pictorially using magazine images and pens. During the session, these two patients stood out as contrasting in terms of the amount of activity that they did and in the way that they went about it, and I wondered whether this was an indication of difference in effort. Field notes described Ethan, the first patient:

> Standing and energetic in his movements, seeking magazines, looking through them carefully and quickly. Appears actively engaged in the activity, wanting to find a specific way to represent himself pictorially. Found a picture, expressed delight and showed it to the OT. Carefully cut it out. Changed scissors because not sharp enough. Taking time to position picture, pasted on carefully and neatly. Choosing pens in colours that compliment the picture for labelling it with his name - flamboyant writing - purposefully so. Looking for more pictures. Talking about making the picture look better. Embellishing picture with patterns drawn around edge. Looks pleased. OT congratulates him. Looks very pleased.

After the group, Ethan was interviewed:

> Me: You did a lot in the group; tell me about your experience of the group
>
> E: I like to show people if there's something to do, I want to be the first, to do well.
>
> Me: Why?
>
> E: It's nice to help people, we were a team and it helps myself
>
> Me: How?
>
> E: You have to put your whole strength to be the first person. It would be nice to have the first prize for being the best. At school it was a struggle for me, I did not do well. I want to do well, to put my hand there and show I can be the best. So, give it your strength, then you get a pat on the back [from the OT] - it is a reward, that you've done well. I like it.
>
> Me: Did it take effort?
>
> E: Decorating the picture, making curls and writing my name nicely - doing everything nicely, doing well.

Me: Why did that take effort?

E: This is not natural for me. I had to think a lot, how to make it look nice. I had to make the decoration myself, with my own hand - it was difficult. I have to tell myself I can do a lot, so I can do well.

Me: Was decorating doing a lot?

E: Yes

This extract illustrates that the conditions for effort were created in the relation between the person, activity and environment. Motivation was expressed as liking " to show people", liking to help people and wanting "to be the first, to do well", "be the best" and to gain recognition or praise from the therapist. The activity of representing himself through a collage required skills that he possessed for selecting, cutting and pasting. However, his skills and ability for decorating his picture to a standard that would gain praise from the therapist were challenged: it was difficult. Therefore, effort occurred in the execution of part of an activity for which he was motivated to do well. Ethan's explanation of his activity participation made sense of my observations of him actively participating, taking care of his work and doing a lot, as possible signs of effort. Indicators such as these are discussed in the section on what effort looks like (section six). In contrast, Bill's activity participation was recorded as:

Seated. Slow. Everything is happening around him. Not putting himself forward. Looking at a magazine. Slow. Found a picture. Cutting it out quickly. Not taking care. Stuck picture to paper directly in front of him - didn't look for best position on collage. Stopped. Doing nothing. Not paying attention to anything around him.

Extract from the interview with Bill:

Me: Tell me about your experience of the group

B: It was nice.

Me: I saw you chose a picture of a dog and stuck it quickly, then you didn't do anything for a long while. Why?

B: I saw a dog and I liked it so I took it

Me: When you saw the picture, you wanted to take it?

B: Yes

Me: After you got the picture on the paper, you didn't do anymore but were sitting - tell me why that was.

B: The picture of the dog - it is a very beautiful dog and it represents me well because I like dogs.

Me: So, did you feel that the picture of the dog was enough?

B: Yes, there was no need to look for more.

Me: Why did you come to the group today?

B: Just something to do.

Me: Did it take effort?

B: No, not really. It wasn't difficult. It was nice to find such a beautiful dog.

In contrast to Ethan, Bill did not express a lot of motivation for the activity - it was "just something to do" and in doing it, he wanted the picture of the dog. Having completed the activity, there was not a requirement from the therapists to do more and unlike Ethan, he did not feel motivated to do more, such as make it look neat or attractive, find the best position for it in the group collage or do the activity to a standard that would be appreciated by others. The fact that there were others in the environment, was of no consequence to Bill. Overall, no challenges were posed by the activity as Bill had the skills to do the basics required by the activity: select, cut and paste. In the absence of challenges either to his ability or to his motivation, there was no experience of effort.

This section has set out the conditions of effort in activity participation as motivation exerted in meeting the demands or challenges of activity participation. Activity participation occurred where the person, activity and the environment traversed i.e., the person doing the activity in the environment (Fig. 6-1). However, effort was not an automatic product of doing activity, but occurred on an individual basis when activity participation was experienced as demanding in a way that required the exertion of effort, or felt effortful due to being psychologically draining. This differed for every participant. The person-activity-environment relationship was a dynamic one: changes in one component of the relationship could make the activity participation more or less demanding and subsequently require more or less effort. This was however, determined by how the participant related to those changes. Therefore, it was the participant's relation to activity participation that *created* the conditions for effort.

6.4.2 Contribution of other data sources

The idea that activity has demands was familiar to me in my pre-existing professional knowledge as an occupational therapist. In the occupational therapy profession, activity participation is understood to occur where person, activity (or occupation) and the environment overlap (Baum et al.2015) (Fig. 6-1). The way that I understood activity participation was heavily influenced by this knowledge.

In occupational therapy literature, factors involved in activity participation are thought to involve the characteristics of the activity and the person, and features of the environment (Baum et al. 2015). Hence, a core occupational therapist skill is analysing activity and the environment in order to identify those that place demands made on a person's functional ability for activity participation (Creek 2003). Activities are known to have distinct features and demands based on the physical and socio-cultural environment in which they are performed (Law et al. 1996; Thomas 2012; Baum et al. 2015). As was seen in participants' activity participation, activities have inherent demands due to the characteristics of the objects they involve, the sequence in which steps of the activity must be done and timing (Thomas 2012).

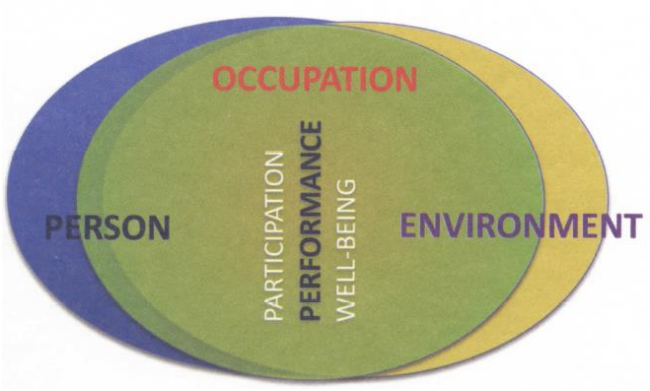


Figure 6-1 Section of a figure depicting activity participation as intersection of person, occupation (activity) and environment (Baum et al. 2015).

For participants, there were also added demands such as personal and social expectations for doing something well or right, and the environment also presented barriers or challenges. Environmental demand is defined by Hagedorn (1997) as "the combined effect of elements in the environment to produce expectations for certain human actions and reactions" (p. 144). Initially described by Lawton and Nahemow (1973), environmental press is also a concept used in occupational therapy to describe the challenges presented by the environment in which activity is undertaken. The greater the environmental press, the greater the challenges and demands placed on the person; the lesser the demands the easier the activity participation (Lawton & Nahemow

1973). Hence, Hagedorn (2000) also defined environmental demand as "the challenges presented by an environment which press the individual to respond by appropriate occupational performance" (p. 308).

To look beyond my professional area, I searched for literature on demands and challenges. A range of literature explored models and frameworks for explaining the link between stress, demands or challenges and performance, a detailed discussion of which is presented in Chapter Eight (Discussion). Of relevance to this section, Lepine et al. (2005) in considering the work environment, suggested that stressors are "stimuli that place demands on individuals" (p. 764). These may be considered as hindrances that get in the way of doing activity (e.g., processes, environment), or challenges such as workload, job demands and complexity. These are referred to as challenge stressors by Cavanaugh et al. (2000).

In the current study, the notion that demands are experienced on an individual basis depending upon the person-activity-environment dynamic, was evident in a great deal of the literature. A particular example was the Challenge Point Framework (Guadagnoli & Lee 2004). This sets out the conditions for learning, which is considered to be a challenge to an individual. How challenging the learning activity is, is posited to depend upon the *difficulty of the to-be-learned task*, the individual's functional skill level and the influence of the environment on the functional difficulty of the task, making it easier or more difficult to perform well (p. 213). Therefore, Guadagnoli and Lee (2004) specify demands as having origins in the activity (inherent demands), and functional demands that relate to the individual's ability and environmental influences.

This literature gave me confidence that demanding activity in the person-activity-environment dynamic has relevance and applicability in the way that I had observed and understood it. activity requirements, demands and challenges.

6.5 Section three: The decision-making process

This study's objectives included discovering the antecedent to effort and the process of effort. Constant comparison of the circumstances under which effort did and did not occur, led to the discovery that motivation as an aspect of relating, sparked the decision-making process leading to a decision regarding whether to undertake activity and the quantity and quality of effort to exert. The decision is conceptualised as the decision response, which ultimately converted participants' motivation into effort in activity participation.

The decision-making process was comprised of several inter-related sub-processes conceptualised as *weighing up* and *getting motivated*. The weighing-up process is comprised of three sub-processes (Fig. 6-2):

- process thoughts and feelings about the activity participation.
- predict what the experience and outcome of the activity participation will be.
- gauge the effort required in relation to demands of the activity participation.

Linked to weighing-up, processes for getting motivated were also frequently employed (Fig. 6-2):

- 'Getting motivated by others' through considering others' views of whether one should do the activity, or one's motivation is facilitated by the actions of others.
- Negotiating effort, which involved managing challenging thoughts and feelings.
- Negotiating participation, which involved modification of the activity participation or problem-solving so that the activity participation was more 'do-able' or motivating.

The weighing-up and getting motivated sub-processes of decision-making were inter-related and could occur simultaneously. There was no hierarchy of importance of processes and no set pattern to which process occurred first, therefore they cannot be explained in a set order here. Several sub-processes simultaneously occurred in many individual participants, as indicated by the *italicising and underlining* of the processes as they appear in the data presented. This section begins with an explanation of weighing-up and getting motivated followed by illustrating their respective sub-processes with raw data.

6.5.1 Overview of weighing-up and getting motivated

In order to arrive at a decision about whether or not to undertake activity participation and exert effort, participants considered numerous aspects of the activity participation i.e., aspects of the person-activity-environment relationship. Thinking about the activity in the environment was to do with what the activity was, its purpose and value (**Thoughts and feelings**), what the activity participation demanded / required (**Gauging effort**), whether it would be enjoyable or satisfying and what the outcome might be (**Prediction of activity participation**), and whether it was feasible or achievable (Prediction of activity participation). Participants considered aspects of the activity participation in relation to each other, by *weighing-up* one aspect in relation to others. In doing so, they judged whether the activity participation was worth the effort.

When faced with making a decision about something that they did not want to do, or the decision was difficult to make due to negative thoughts and feelings, processes for getting motivated came into play to enable making the decision to do the activity. These processes were: considering

others' views and/or their motivation was facilitated by others (**Motivated by others**); managing and coping with challenging thoughts and feelings in order to overcome them and decide to do activity (**Negotiating effort**), and modifying activity participation so that it would be more satisfying, or manageable, and/or problem-solving (**Overcoming challenges**). Getting motivated processes emerged as observable signs of effort, as discussed in section five.

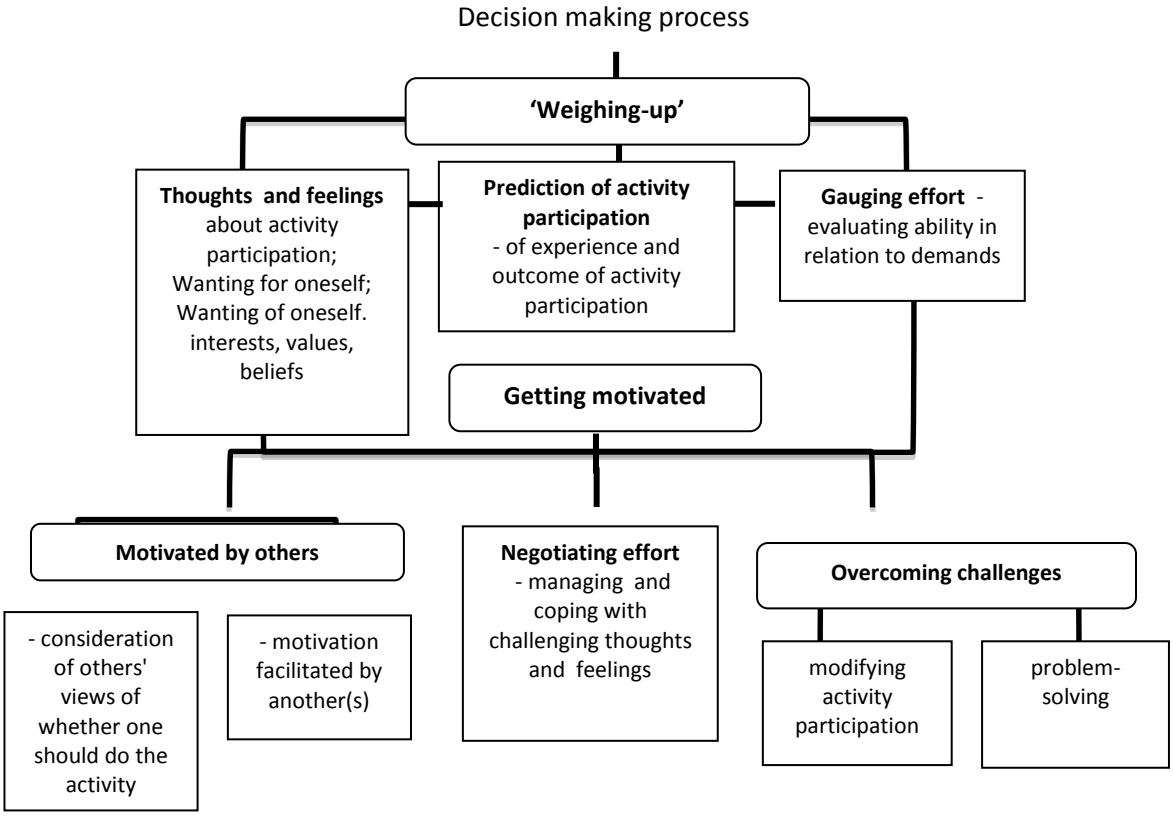


Figure 6-2 The decision-making process

6.5.2 Weighing-up and getting motivated: thoughts and feelings (motivation and relating)

Initially motivation emerged as the antecedent to effort, because effort was evident in activity participation that participants did predominantly because they wanted to do it, or had an interest in it. However, as I made more observations and was exposed to a greater range of people's functional abilities, I repeatedly reflected upon how motivation as a construct did not completely encompass what I was observing. Rather, the term relating frequently came to mind. By this, I meant that it was how participants related to activity in terms of how connected they were to activity, how they understood and perceived the activity and the people and objects involved, and the meaning that the activity had for them. A sense of the relevance of relating was particularly evoked by participants who had limited ability to perceive and understand themselves and the world around them, as described in section 6.6. For these participants, motivation did not

adequately describe the antecedent to effort. However, for those with better functional ability, motivation was clearly demonstrated and expressed as the antecedent. I eventually conceptualised motivation as an aspect of relating.

I noticed that some participants' motivation did not always translate into effort. For example, stating that they really wanted to do an activity, but when the time came to do it, appearing reluctant to put in effort. I considered what happened to participants' want for something when their motivation dissipated by the time they came to do activity. Through constant comparison of data, the decision-making process emerged, through which participants' considered their motivation for activity participation before arriving at a decision. Subsequently, motivation emerged not only as an antecedent, but as what was considered, or processed in terms of thoughts and feelings before deciding upon activity participation. Therefore, thoughts and feelings feature in both weighing-up and getting motivated within the decision-making process.

Participants' motivation i.e., thoughts and feelings about activity participation, was categorised as *wanting something for oneself*, and *wanting something of oneself*. Participants wanted something from activity participation, in the form of tangible and intangible rewards, gains or outcomes of their effort. Examples of tangible rewards were a meal or a bracelet made by the participant; intangible gains were knowledge or feeling enjoyment or satisfaction. It was common for participants to want a combination of tangible and intangible rewards, such as a runner gaining enjoyment and learning from the experience of running (intangible) and also receiving a medal for completing a race (tangible). From the patient sample, Ethan wanted to complete all of the tasks set him by the occupational therapists in a session (tangible) and gain satisfaction from their positive feedback (intangible):

> If I put in effort I get [to make] the picture and a pat on the back – that you've done well. I like it (Ethan, patient, cohort 1).

On completion of the tasks, Ethan's satisfaction came from achieving the task and from the therapists' recognition for doing well. Participants' reasons for effort were either intrinsically motivated i.e., doing activity because it was personally meaningful and satisfying, or extrinsically motivated such as doing activity for financial reward. Ethan was intrinsically motivated for the satisfaction gained from achieving the task and for praise, and extrinsically motivated by the therapists who encouraged him to persevere in the task and gave the external reward of praise. Participants that were doing activity that was intrinsically motivated, showed greater strength of

motivation and effort in contrast to activity participation that was solely motivated by external influences or rewards. In the main, the latter were described as something that participants felt they had to do rather than wanted to do, and this effort was less satisfying than intrinsically motivated effort.

This was particularly evident when participants talked about what they chose to put a lot of effort into. Participants' motivation and effort was predominantly for activity that brought about a change either in their feeling state, a fundamental change in themselves, or achievement. Change in feelings included having a sense of being challenged by the activity, alleviation from boredom, feeling relaxed, excited, enjoyment, pleasure or satisfaction. More fundamental change was a major motivator for effort, and included a desire for gaining knowledge, developing relationships or skills. Whatever the focus, what participants predominantly wanted for themselves, was a changed self, be it temporarily and short-term or more lasting.

Patients were particularly motivated for change due to needing to manage and recover from their health conditions. Patients in the burns unit focused almost exclusively on activity participation for the purpose of regaining their function. This was an essential short-term goal to achieve in order to attain their longer-term fundamental goals of gaining approval, or acceptance of family/community, or to return to, and therefore regain their jobs, social status, social acceptance and financial security. These gains or rewards were fundamental to re-establishing meaningful and fulfilling lives, self esteem and identities. Equally, patients that had had troubled pasts consisting of unhealthy or destructive lifestyles, wanted to develop a meaningful or a better life for similar reasons. These participants frequently described effort as straining or stretching themselves, as discussed in section one.

Participants also wanted something *of* themselves in activity participation. That is, they wanted to connect with themselves in a profound way - they wanted themselves. Participants expressed wanting to show, prove or demonstrate *who I am* to others and themselves. Participants also wanted to demonstrate, live and experience that *I am* and *I can*. Many patients perceived that in the course of their illness and/or hospitalisation, they had lost something of themselves, in functional and/or identity terms. For them, a reason for exerting effort in activity participation was to show or confirm who they are to others and to themselves. In terms of wanting something of oneself, they wanted themselves in activity participation. Nina, a mental health patient explained why she put effort into activity participation:

> ...to show that I am okay now; I can concentrate on something because when I'm sick I can't give my concentration on something for a long time. So, that activity really takes concentration to do it - so I can do it. (Nina, patient, cohort 1).

A burns patient viewed effort in activity participation as evidencing that *he is*:

> It [effort] is how I can express myself to do something. (Carl, patient, cohort 1).

Similarly, a mental health patient's effort was for knowing and seeing himself in activity participation:

> Effort is knowing for myself I can do it. Showing me in life I still have the skill to reconnect things, to create things in my own self. I still have the ability to do so. (Tony, patient, cohort 1).

For these participants, they had a profound relation with activity participation as it provided them with more than gaining something for the self. This was also evident for participants that were not patients, such as the swimmers and runners who gained a sense of what they were capable of through pushing themselves in races, or in pursuit of new goals.

6.5.2.1 Thoughts and feelings: interests, values and beliefs

Whether motivated for something for oneself, or of oneself, progressing from feeling motivated towards activity participation to deciding to undertake it, involved processing thoughts and feelings about the activity participation in relation to the self. Thoughts and feelings related to interests, values and beliefs about activity participation. Interest featured strongly in making a decision for activity participation and tended to be those that participants had previously experienced as enjoyable or satisfying in some way, or about which they had curiosity. Interest could prompt activity participation, because participants <u>*predicted*</u> that it would be a satisfying experience:

> [when offered the opportunity to attend occupational therapy] I think *"I should go there and see what they have got for me to do; maybe I can learn something".* (Tim, patient, cohort 1).

Interest was linked to the meaningfulness of activity participation, manifesting in willingness, eagerness or readiness to engage in activity participation (see signs of effort, section 6.8). In the

example below, the subject of sleep within a therapy session on balanced lifestyles, was meaningful to the patient and therefore of interest:

> When we offer an education group, they pick up – *"I'd like to know something about sleep, I'd like to increase my knowledge about that".* They can identify with examples from their own life when it's explained to them; where this information might be helpful to them and you visually see people pick up if they're interested. (Mandy, OT, cohort 2).

Linked to thoughts were participants' feelings towards activity participation. These were most evident in relation to participants' beliefs about whether they had the ability to do the activity. These were frequently expressed prior to and during activity participation as confidence, or lack of confidence in themselves and anxiety. Participants' beliefs in their abilities were in relation to what they perceived the demands of the activity to be i.e., *gauging the effort*. When participants believed they had the ability to do the activity, do it to the standard or in the way that they desired, and believed (*predicted*) they would gain satisfaction from it, they appeared motivated; eager to engage. These were also usually the activities that they put a lot of effort into. Conversely, a lack of belief in ability evoked negative feelings such as anxiety, manifesting as reluctance, hesitation or avoidance. When unable to manage negative thoughts and feelings this sometimes led to deciding not to do the activity, therefore no effort. For example, Sarah, (older person, cohort 3) wanted to travel abroad on holiday on her own but she was consumed with anxiety that many aspects would be too difficult to manage, such as understanding the currency and managing a foreign language. The anxiety was evoked by gauging that the activity required more ability than she had (*gauging the effort*), therefore she *predicted* that the activity participation would be a dissatisfying experience with a poor outcome. These aspects outweighed her desire to go on a holiday abroad and each year she decided not to attempt it.

Therapists also spoke of seeing a lack of self belief in patients, resulting in no motivation to do activity, therefore no effort. Positive changes in self-belief were observable in the way that patients responded to and engaged in activity, as described by Karen (OT) who recalled a ball game session with a patient:

> Effort comes with belief as well. We've [Karen and patient] moved now onto throwing two balls at once. If I'd said to him before *"this is what we're going to do",* he would have said *"no"* because of lack of belief in himself, but now that we've gradually built up to

> doing this and he has managed the easier exercises, I can see that he believes he can do it and he engages. (Karen, OT, cohort 2).

When participants had a lot of negative thoughts and feelings about doing an activity and subsequently lacked motivation for it because they lacked interest in it, or they predicted it would be an unpleasant experience, processes for *getting motivated* often came into play. This enabled participants to decide to put effort into activity participation despite predicting it would be an unpleasant or dissatisfying experience and/or outcome. Many participants spoke of activity participation that they really disliked, finding the experience neither pleasurable nor satisfying, but they decided to do it nevertheless. This was because the *value or importance* of the outcome outweighed the anticipated unpleasant experience. For example, Noreen (older person, cohort 3) played Scrabble with others one evening a week, not because she found either the game or the company enjoyable, but because she was lonely and valued having company. Noreen predicted that the activity participation would be a somewhat dissatisfying experience in itself, but a reduction in loneliness as an outcome was valued highly enough to outweigh the negative aspects. Thus, enduring the activity would be worth the effort, prompting a decision to participate.

Niamh (older person, cohort 3), found physically demanding activities such as mowing the lawn and gardening challenging, taking a lot of effort. However, she placed importance on the social-cultural values of her community that were to do with keeping the neighbourhood tidy and respectable. In this conflict between not wanting to strain herself physically but also not wanting to fail to maintain standards, the importance of the latter outweighed the former:

> I loathe doing housework. If there is anything I could give up it would be housework. But it has to be done because you can't have a filthy house-wouldn't be nice to people coming round. It's not really acceptable, just like it's not really acceptable to leave my garden to get overgrown. That's something that takes a lot of effort now, just physically. But if I didn't do it, it would look a mess to everyone living around here. You have to keep standards up don't you? (Niamh, older person, cohort 3).

Niamh was influenced by her own values, but also by considering the views of others, hence she was indirectly *motivated by others.* An occupational therapist also recounted how she had been spurred on to put in more effort into exercise at the gym, by the fact that there were others putting in a lot of effort next to her, encouraging her to do more.

Participants who were patients on the burns ward talked about the importance of regaining their life roles such as being able to work, take care of their families or being accepted by their communities through overcoming their disabilities. The activity participation within occupational therapy was extremely important to them, because it was through this that they perceived they would regain function and ultimately regain their lives. Thus, although they gauged that the effort required would be great because of the physical pain that they experience (g*auged the effort)*, they *managed and coped with the feelings* of anxiety and stress that this caused, and decided to do it.

Moral values were also a motivator, linked to *considering the views of others.* The gravediggers spoke of the moral obligation that they had to ensure that a grave was ready for a family to bury a loved and how unacceptable it would be for them to fail. Therefore, when there were challenges such as sodden ground to excavate, they decided it was important to put in effort to persist because it would be morally wrong not to complete the job and do so properly:

> In the back of your mind you have to get it done because you think of the effect on the families if the grave isn't ready, so there's no way you can give up. (Simon, gravedigger, cohort 3).

Mike, aged 55 had been a road workman for 30 years. He talked about finding the job increasingly physically challenging and he no longer enjoyed it (*prediction of activity participation*). He struggled to get motivated to get out of bed every day to go to work, but did so out of a sense of moral obligation to provide for the family:

> It's monotonous doing the same thing every day – some days I do get bored with it. But, I still have to come and do it to get the money to pay the bills, so I have to motivate myself to come and do it. (Mike, road worker, cohort 3).

In these examples, the weighting given to certain aspects of activity participation tipped the participants into a decision. When there were negative feelings towards activity participation, making a decision for activity participation was possible when participants were able to manage and cope with those feelings in order to consider a range of factors. Doing this rather than deciding not to do the activity required motivation due to the fact that negative thoughts and feelings suggest a negative impact on motivation. Thus, making a decision for activity participation despite this, was identified as a sign of effort in itself, as discussed in section 6.8.

In many circumstances, making a decision was effortful and required motivation. The concept of getting motivated emerged from interviews during which participants spoke of having to *find motivation* or *get myself motivated* when the decision to do activity was difficult to make due to negative thoughts and feelings:

> being motivated to put the effort in now is harder than it used to be. I put it down to age - I'm 57 now and ordained for 24 years...the ability to find motivation is harder with the passing of years. I don't care as much for this congregation as for those in the past. That's a difficult thing to say, but I don't feel so enthusiastic or positive about this work. Getting motivated...yes, that's difficult sometimes. (Jake, church minister, cohort 3).

Managing and coping with feelings was conceptualised as negotiating effort, because many participants negotiated their way through challenging thoughts and feelings, counteracting them with more positive ones. Some participants described internal conversations with themselves in their minds, in order to overcome negative thoughts by making counter arguments in favour of activity participation:

> I loathe supermarket shopping...the negative effort is the battle in my brain against something I really don't want to do, and it takes a lot to turn that negative effort into the effort to the shopping. I have to motivate myself to do the shopping...I start off thinking about it, then I find reasons not to do it, and then I come up with as many reasons as possible why it's a good idea to do it. It's like a game really, in my mind, but its' the only way that I can get myself to the point of deciding to do it. (Margaret, housewife, cohort 3).

Participants internally negotiated with themselves and as such they negotiated the motivation and effort to do activity. In this respect, many participants referred to having to summon up motivation and effort:

> When I really don't want to do it, it's like having to get together all your resources either mentally or physically to do something. (Noreen, older person, cohort 3).
> Sometimes on a Sunday after a service [when depleted of energy], we have some tea and coffee and chat with people and that will require an effort. Occasionally a question will be asked or a conversation will begin and I sense that actually I need to be fully engaged...it feels as though I have to summon-up something. (Mitch, church minister, cohort 3).

6.5.3 Contribution of other data sources

The literature contributed to the concept of relating, gauging effort and weighing-up.
As discussed in the findings above, I had a strong sense that relating was relevant to effort.
The terms relating and relatedness continually appeared in theoretical memos and field notes to describe what participants seemed to be seeking in activity participation. Relatedness and relational contact are terms that I was familiar with in the Theory of Creative Ability (du Toit 1973, 1974a), although not defined. I had my own ideas of what relating and relatedness meant, but I sought clarity from the literature. Relatedness is a term most frequently used to refer to the human need for interpersonal attachment (e.g., Hagerty et al. 1993; Pintrich 2003), connectedness with others or a sense of belongingness with others (e.g., Ryan & La Guardia 2000; Hagerty et al. 1992, 1993). Relatedness is a construct that has most extensively been explored within Deci and Ryan's Self-Determination Theory (Deci & Ryan, 1985, 2000, 2008), as the need to belong, referring to the tendency to be motivated towards forming interpersonal bonds (Baumeister & Leary 1995; Ryan & Deci 2000). Relatedness is understood to be one of three universally fundamental human needs, together with autonomy and competence; the meeting of these needs being essential for health and well-being (Deci & Ryan, 1985, 2000, 2008).

The conceptualisation of relatedness as only relevant to interpersonal and social relationships, seemed too narrow. According to Deci and Ryan, relatedness is to do with the need for attachment, belonging and feeling connected. While the former is only relevant to interpersonal relationships, I thought that the latter has relevance to the need for every individual to feel connected to the non-human environment. In this study, participants demonstrated in action and verbally expressed a need to relate to the self (wanting of oneself) and to relate to the world and all that it encompassed, not only the people within it. In fact, the need to feel connected to the self and the non-human world through activity participation featured more predominantly in the findings than the need to relate to others. Therefore, I viewed relatedness as having greater breadth and depth dimensions than suggested by Deci and Ryan. Subsequently, in the Theory of Human Relatedness (Hagerty et al. 1993), relatedness is described as the need to be connected "to others, social institutions, environments, and self" (p. 173). This resonated with my what I was perceiving in participants' actions and relations. Hagerty et al.'s (1993) conceptualisation of relatedness is discussed further in Chapter Eight (Discussion).

Weighing was a concept that I was drawn to whilst reading something completely unrelated to the study. In a grounded theory study on the experience of occupational therapy clinician-researchers, Cusick (2001) found that participants entered into a process of weighing outcomes to

reflect on the effort involved in doing research. This consisted of considering "costs and benefits derived from this effort" (p. 12). In the study, participants' consideration of aspects of the activity, resonated with what was being discovered in this study and I adopted the term weighing to describe it.

At the time of undertaking the focus group, gauging effort had not been conceptualised as part of the decision-making process, but was suggested to be of importance by one participant (see section 6.10.2). Gauging effort emerged of its own accord during further data analysis after the focus group, but the focus group had sensitised me to this concept.

6.6 Section four: Awareness and decision-making

As discussed in the previous section, to be able to feel motivated and decide to do activity, required thinking about the activity participation in relation to the self. This required awareness of the activity and ability to relate it to the self. This finding emerged from observing patients' responses to people and activity going on around them, and how this appeared to influence their participation and effort. The relevance of awareness to effort was particularly evident in my observations of what it took for patients who lacked awareness, to move from no effort into effort.

This section explains how the degree of awareness that patient participants had of themselves and their surroundings, significantly influenced their motivation and ability for making a decision for activity participation and effort. In these incidents, a decision for effort in activity participation resulted from therapists getting patients motivated, by facilitating their motivation. The therapy interventions by the therapists were obviously not behaviours that patterned out across the sample. Reporting on therapists' interventions has relevance however, because it contributes to discovering the process leading to effort - it is the pattern of process that has significance.
I was sensitised to the complexities of awareness by the re-occurrence of the mention of awareness in my field notes, which led me to explore awareness in the literature. This section explains the significance to the decision-making process of two dimensions of awareness as described by Markova and Berrios (2001, 2006): *awareness in relation to* and *awareness of*.

6.6.1 Getting motivated when lacking awareness in relation to

Awareness in relation to was highly influential on the decision-making process. *Awareness in relation to* involves evaluation and judgment about something in relation to the self (Markova & Berrios 2001, 2006); in this study the something was activity participation.

The influence of *awareness in relation to*, to the decision-making process became apparent from observing patient participants who were either unable, or struggled significantly to make a decision for activity participation, because they had not yet come to terms with their altered physical self caused by an illness, injury or condition. That is, they could not yet relate to the altered self because they did not have *awareness of* the illness, injury or condition and its impact *in relation to* the self. The participants appeared to be in a state of denial or none acceptance of their condition. This *lack of awareness in relation to*, manifested in extreme difficulty, or total inability to think about undertaking the activity participation proposed by the occupational therapist as treatment. The decision therefore, was to reject it and not do it.

This phenomenon was first discovered in the data collected on patients that were in-patients on a burns ward, who had suffered serious disfiguring burns to large areas of their bodies. Through interviews with patients who had managed to come to terms with the burns, it was clear that the disfigurement and/or disabilities caused by the burns could potentially affect their entire lives i.e., their self image, relationships with family and partners, acceptance by society, ability to fulfil life roles and to work, and therefore their ability to survive financially. They had accepted what had happened to them and decided to do the activity participation in occupational therapy in the hope that it would restore function, and in so doing, would enable them to recover their lives.
In contrast, patients that appeared to have not come to terms with what had happened to them, immediately rejected the occupational therapists' offer of intervention. Theoretical memos on these instances noted how they did not appear to be connecting with, or finding meaning in the occupational therapy, because they could not relate the treatment to themselves. That is, they had not yet come to terms with the changed self in order to relate the activity participation as treatment to that self. The occupational therapists explained these patients' responses as a psychological reaction to the trauma of being burned, impacting upon their motivation and ability to make the decision to act:

> I see a lot of psychology.... those feelings of anger, frustration and all of that comes up a lot and you have to accept it and leave them until the next day when you try again to see if they will take to therapy, but if they have not worked past the anger in order to take stock

> of themselves, usually they are not motivated. There's nothing I can do - you can't fight back with them, you must wait for them to be ready in their own time. Much of the psychology must change before they can move on and make decisions to take to therapy, but that change must come from them. (Lorna, OT, cohort 1).

Similar to patients with burns, occupational therapists working with patients with arthritis spoke a great deal about patients that did not undertake exercise or wear the splints prescribed by the therapists, because they had not developed insight into the condition, and the need for the prescribed intervention:

> It takes a lot of time before we get them to the point where they accept the illness and take responsibility for themselves. A lot of them are in denial. (Rachel, OT, cohort 1).

The therapists spent a long time explaining arthritis to the patients, showing them diagrams and explaining how and why splints and joint protection strategies could limit the worsening of the condition. However, many patients could not relate this to themselves and usually returned to the clinic some weeks later without having applied the advice to themselves.

Occupational therapists working with people who had suffered a stroke also talked about patients' lack of awareness, but for different reasons. Patients knew that they had had a stroke resulting in one-sided weakness and sometimes speech problems, but they often had difficulty in engaging in the therapy because improvement was slow and in small measure. This, coupled with not understanding that recovery is slow, made it difficult for patients to relate to the value or purpose of the therapy exercises:

> Sometimes the patient has difficulty seeing the improvement. Not understanding the stroke and the rehab process yet is very problematic - how what we are doing has anything to do with getting better is hard to understand. It makes it difficult to get the engagement from them with therapy. (Ruby, OT, cohort 1).

In all of these instances, the patients lacked awareness of the impact of their conditions on themselves, i.e., *in relation to* themselves. *Awareness in relation to* is described by Markova et al. (2005) as comprising of evaluation and judgment of something in relation to the self. Thus, in these instances, patients lacked awareness of their conditions in relation to themselves, commonly conceptualised in the literature as lacking insight. Markova and Berrios (2001, 2006)

suggest that insight is a dimension of awareness, and usually refers to the person's knowledge of a change, what this change means and how it affects him/her. In the previous quotes, a lack of knowledge due to not understanding the change to the self may explain the difficulty that some stroke patients had in deciding to do activity. For the burns and arthritis patients, lack of knowledge appears to be due to psychological reasons, such as denial. This explanation is a conceptualisation of awareness from a psychodynamic theoretical framework (Markova et al. 2005).

The therapists, realising the patients' lack of awareness in relation to, responded with strategies to develop awareness that would enable patients to make a decision for activity participation and therefore, effort. These strategies were to **facilitate motivation, overcome problems, modify activity participation** and enable patients to **negotiate effort**.

The occupational therapists targeted interventions at increasing patients' insight, in anticipation that increased knowledge and understanding of the changes that have occurred to the self, would lead to a decision to undertake activity. For example, therapists working with patients with arthritis spent a great deal of time educating them about the condition and how to manage it in fulfilling their day-to-day roles and activities. Similarly, those working with patients who had had a stroke, verbalised every detail of what was happening during therapy sessions, getting the patients to look at, describe and control their affected limbs, and therapists pointed out any slight improvement, educating them about the recovery process.

On the burns ward, due to the psychological challenges of coming to terms with burns as well as the psychological challenges inherent in deciding to undertake activity participation that inevitably caused severe pain, the therapists employed many strategies to motivate patients. Therapists approached patients that had not come to terms with their burns, on a daily basis and in a consistent way to offer occupational therapy. When patients declined the offer, they did not insist that patients did therapy nor did they try to cajole them, but respected the refusal. The therapists were of the view that this communication of respect for the patient's decision whilst not rejecting the patient, but continuing to offer therapy daily, helped patients to trust and feel safe with the therapist.

On the occasion that the patient suddenly accepted the therapist's approaches, the therapist took time to talk through what had happened to the person, how they felt about it, and educated them on the recovery process and what it involved. Building a trusting relationship was paramount to

patients' development of insight into their condition and to their understanding that therapy that caused severe pain had to occur if they were to recover what they wanted in their lives. Essentially, therapists developed patients' *awareness in relation to*, with regards to their condition and also the activity participation offered as occupational therapy treatment. In doing so, patients could consider the therapists' views and guidance on what therapy has to occur in order to recover. As a result of the therapist's intervention, patients were *motivated by others* to make a decision for activity participation:

> I try to be as caring as I can be and be understanding: explaining and providing guidance with what you're doing, why and how - it really helps a lot. It empowers them.....forming a relationship allows them to trust you, understand what is going on and therefore allows it [therapy] to happen. (Lorna, OT, cohort 1).

I observed several therapy sessions with patients that had recently decided to engage in therapy. The therapists, whilst physically manipulating the patient's arm or hand, held eye contact with the patient for long periods, communicating empathy, care, understanding and reassurance, whilst also verbally encouraging participation. At the same time they were looking for a sign that the pain was becoming too much to tolerate, whereby the therapist asked the patient if s/he wanted to stop, and if so therapy was immediately halted. By enabling the patient to feel supported, understood and in control of the therapy, the patient appeared enabled to make the decision to engage i.e., motivated by others. Furthermore, giving some control to the patients seemed to enable them to overcome challenges as described in section six as a sign of effort. Patients were able to *modify the activity participation* so that it was within their threshold of pain tolerance. This made it more motivating because they knew that they were not going to fail as such because they had permission to do as much or as little as they felt able to manage.

Patients' sense of control, coupled with the trusting relationship with the therapist also appeared to enable patients to *negotiate effort*. It was very clear that when the therapist arrived at a patient's bedside for a therapy session, patients were apprehensive because therapy usually meant experiencing pain. As the therapists engaged verbally with patients, putting the therapeutic relationship and control-of-therapy strategies into play, the patients grappled with their anxiety and thoughts about the session. They expressed this verbally as well as non-verbally through facial expression. Nevertheless, without being persuaded by the therapist, patients decided to engage in therapy. The participants therefore appeared to *manage and cope with negative thoughts and feelings* in order to decide to engage. Interviews with patients revealed

that they counteracted negative thoughts with thoughts about what they wanted, projecting themselves towards a *predicted outcome* of effort in activity participation:

It's hard for me. It is very painful. But I tell myself I must try. I must be normal [in appearance] so I can look nice for my husband. If I can make it [burn] better I can go home and I can be with my children again. (Betty, patient, cohort 1).

What can be seen from these examples, is that to become motivated and able to make a decision for activity participation, required the thought and action of both the patient and the therapist. When unable to channel ability into activity participation, the patient participant needed the therapist to create an enabling environment, or as noted in a theoretical memo: *when they don't have ability and effort, they need the effort of the therapist* (theoretical memo March 3, 2013).

he intervention of the therapist facilitated motivation (*motivated by others*) (Fig. 6-3), to develop the patients' awareness in relation to, regarding their condition and the need for occupational therapy activity participation. The patient could then make a decision for activity participation through the weighing-up process and strategies for getting motivated. The therapist's contribution was facilitating motivation through developing a trusting and therapeutic relationship, explaining therapy and empowering the patient to *modify the activity participation*. This required the therapist to be able to *predict the experience and outcome of the activity participation*. This occurred through assessment of the patient's condition and *gauging the effort* s/he could exert in relation to the demands of the activity. Then if necessary, as the patient participated in the activity it could be *modified* in response to the patient's participation. Figure 6-3 depicts this through shading of weighing up and getting motivated. Fully shaded parts of the process indicate those undertaken by the therapist; half shaded for processes undertaken by patient and therapist.

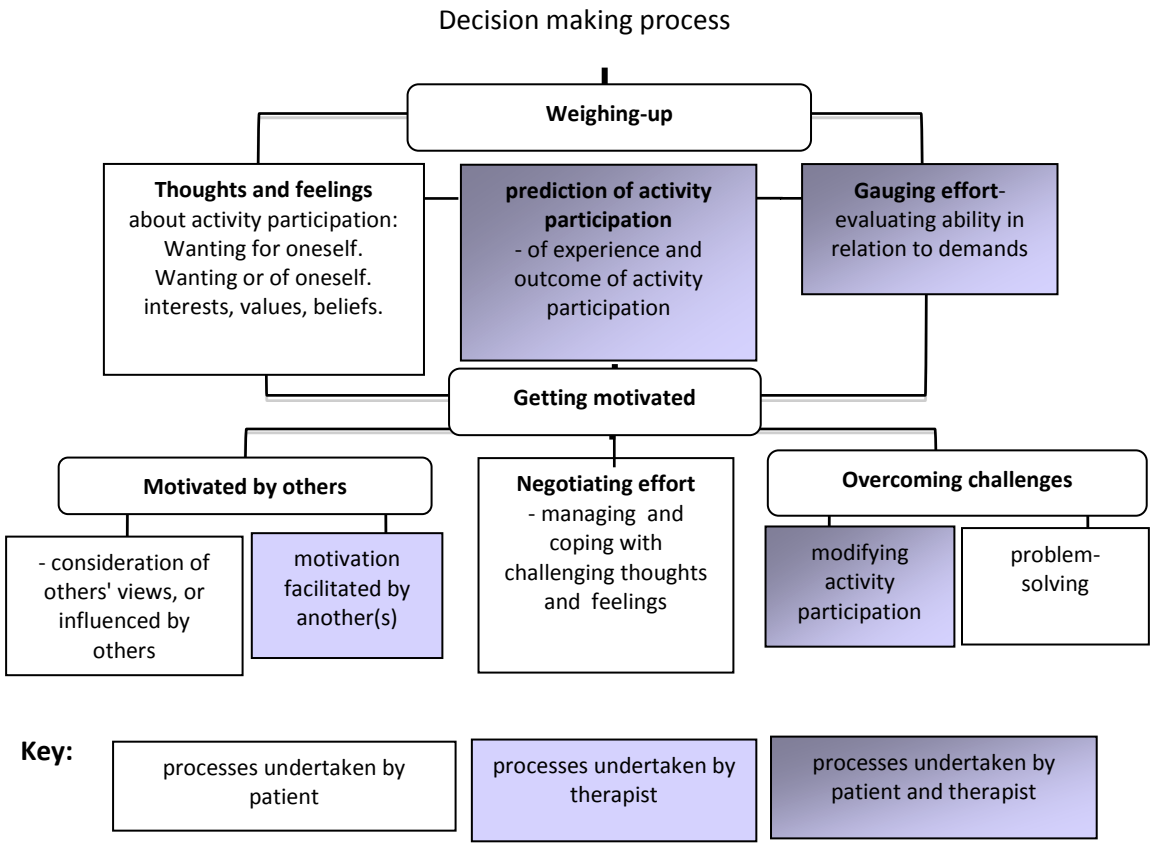


Figure 6-3 Patient and therapist processes to enable a decision for effort.

6.6.2 Getting motivated when lack of awareness of

The significance of awareness of to the decision-making process emerged from observing patients' responses to people and activity going on around them and how this influenced their participation and effort. Varying degrees of awareness and understanding of what was happening around them resulted in varying degrees of effort. When functionally able for example, if participants did not understand what they were to do, they sought more information, thus overcoming challenges by problem solving. However, this could not occur when there was total absence of awareness.

Occupational therapists who worked clinically with people with profound learning disabilities, reported that when patients had no awareness of themselves, people and objects around them, there was no decision to act in relation to it, therefore no effort. Limited awareness and understanding resulted in limited engagement. This was not a surprising finding, but what was significant was that similar to the therapists working with patients that lacked insight, the therapists implemented strategies to increase awareness in anticipation that this could lead to a decision to participate. The difference for these therapists was that their focus was on increasing awareness of, which was needed before there could be awareness in relation to.

Therapists reported that a significant proportion of their work consisted of attempting to enable the patient participant to become aware of themselves, the therapist and therapy objects in the environment and understand what they were. For this to happen, therapists had to use their professional judgment about what things may stimulate awareness and bring them to the person who is too lacking in awareness to outwardly seek things:

> They need things to be presented to them. They can be very self emerged, tapping and hitting themselves....and they can't seek things out but things need to be brought to them – they are reliant on people having an awareness of what is meaningful to them and bringing things to them so that they can behave towards it. (Keith, OT, cohort 2).

With awareness of things, there could be thoughts about them, which motivated action, therefore potentially effort towards it:

> Once you've discovered what stimulation works for that client, you use it again. They've got awareness of it, whether a memory or a natural stimulation reaction, but they've got an awareness of it and a like for it and they are motivated to behave in a way that shows in response to it, that either like or dislike. (Tanya, OT, cohort 2).
>
> Once they have got that understanding, that knowledge, they are motivated. (Mandy, OT, cohort 2).

In the therapy context, when a patient's ability was extremely limited so as to be unaware and therefore unable to be motivated and make a decision for activity participation, the therapists compensated for this by using their own ability. Figure 6-4 illustrates that in therapy, the ability and focus of the therapist was for developing awareness of in patients so they can progress to have thoughts and feelings about activity participation (encircled in blue). The patients did not have awareness in relation to, and therefore they could not consider others' views (motivated by others) and there are no challenging thoughts and feelings to negotiate (negotiating effort). These are crossed out in the Figure.

With such limited functional ability, the therapist facilitated patients' motivation (motivated by others), by selecting the activity, modifying it and solving problems in relation to it (overcoming challenges), based on the assessment of the person's ability in relation to the demands of the activity (gauging effort) and prediction of the experience and outcome of the person's activity participation (prediction). Essentially, the therapist took responsibility for the processes that the

patient was functionally unable to engage in, and it is through this intervention that the person could get motivated.

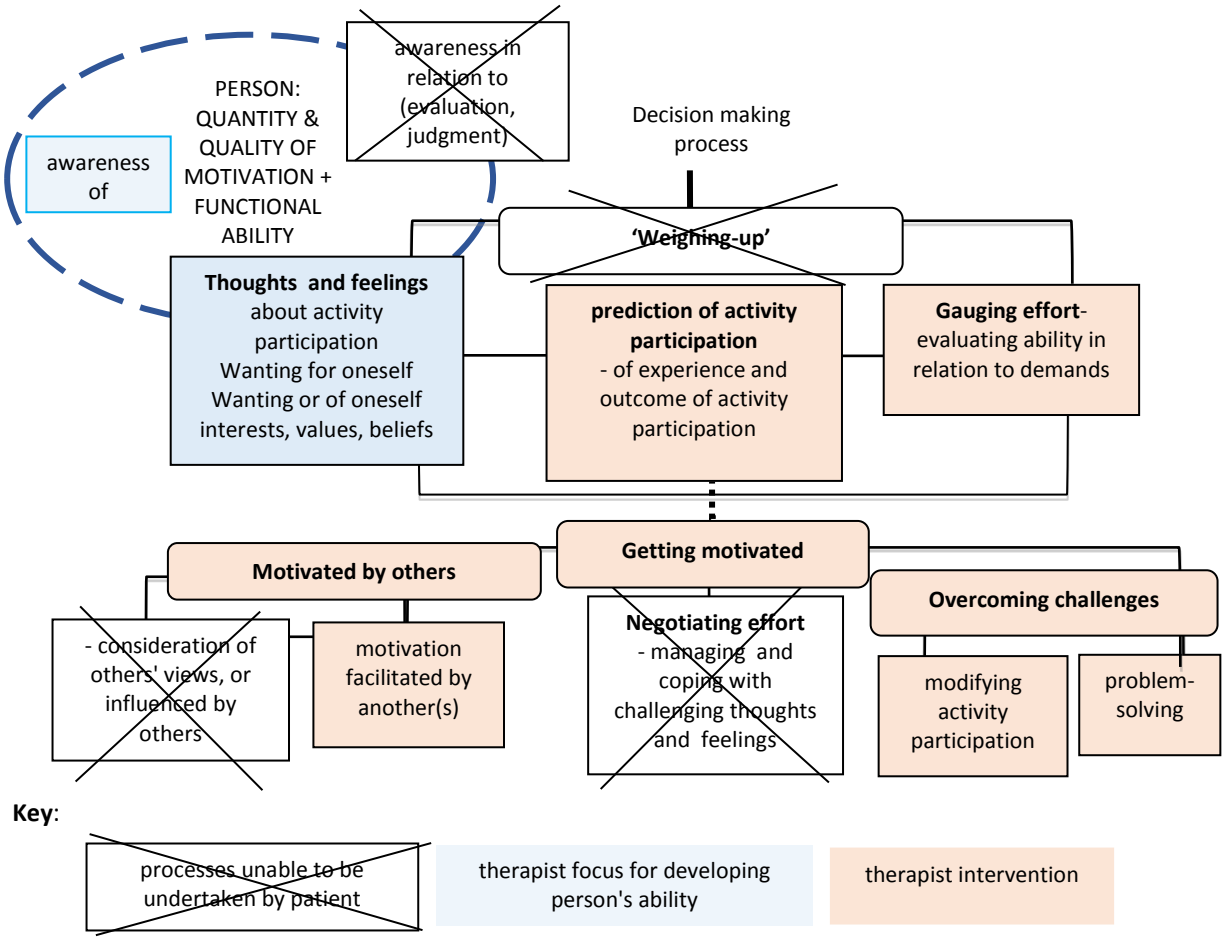


Figure 6-4 Therapist processes for getting a person motivated when lacking awareness of

6.6.3 Contribution of other data sources

As already indicated in the findings above, work by Markova and Berrios (2001, 2006) influenced my thinking about awareness. A participant in the focus group suggested that awareness is necessary for a person to be able to gauge effort required by an activity, particularly when the activity demands change. At the time of doing the focus group, I had already made a lot of theoretical memos regarding my sense that awareness and understanding were highly influential on being able to do activity and therefore, exert effort. However, at that time this was only my perception because there was no raw data as such on the presence or absence of awareness. After the focus group I started to set out the relationships between core concepts and during this process, the relevance of awareness was discovered, although not in the way that the focus group participant suggested.

Regarding negotiating effort and overcoming challenges, the notion of *negotiating* effort came from reading about challenges in activity participation. Crawford et al. (1991) proposed that constraints to participating in leisure activities are positioned in the decision-making process. That is, when faced with constraints, an individual could decide to modify the activity rather than resign to being unable to do it. Jackson et al. (1993) introduced the notion of negotiating through obstacles to modify "rather than foreclose participation" (p. 4). In discovering participants' approach to modifying activity and problem solving in order to get motivated, I initially termed this negotiating participation. I later changed this to overcoming challenges because this had already been identified as a sign of effort and I realised that this was modifying and problem solving in action. Therefore, I rejected 'negotiating participation', but I found the concept of negotiating to be relevant to managing and coping with thoughts and feelings. Hence, I conceptualised negotiating effort, as explained in the findings above.

6.7 Section five: Decision response with an attitudinal response

As an antecedent to effort, at the end of the decision-making process was a decision for activity participation - a decision response. In the decision was attitude towards the activity participation - an attitudinal response. Attitude, seen in the motivation for activity participation was ultimately expressed in the strength of effort exerted.

6.7.1 Motivation as attitude

Motivation was expressed in participants' attitude towards activity participation. Attitude is the mental position, or feeling toward something (Ajzen 2001; Petty et al. 1997), and therefore has an influence on motivation. Whether they had a positive or negative attitude was evident in the thoughts and feelings that they shared in the interviews regarding whether the activity participation was of interest, value or importance, and the beliefs that they held about whether the activity participation would be pleasurable, satisfying, rewarding, or successful. How positively or negatively participants felt towards activity participation i.e., how positive or negative their attitude was, influenced their motivation. Therefore, attitude influenced whether or not they decided to do activity, and with what degree of effort.

The link between attitudinal response and strength of effort was particularly evident in patient participants in a burns ward. In that context, patients underwent excruciating pain during

occupational therapy when the therapist moved patients' burned limbs in order to prevent irreversible deformity. Whether this intervention took place, was the choice of the patients. For patients to decide to allow this to happen did not require feeling positively towards it as such, but to have shifted from a totally negative attitude seen in unwillingness and amotivation, to being positive in the sense of being willing. This was a shift in motivation:

> It boils down to motivation at the end of the day. I can push and try and motivate [them]. If they are motivated they will take to it – but they have to be willing to undergo that pain – willingness is a major part of it. If de-motivated and they're unwilling, there's not much I can do until they snap and realise that they don't have any control over the fact that this has to happen. (Lorna, OT, cohort 1).

Being willing, reflected a readiness to act - to do the activity. A negative attitude, evidenced in unwillingness and inaction was described by many of the occupational therapists working with patients with physical conditions. They described seeing unwillingness in patients' failure to take responsibility for their recovery (amotivation). Sarah described this in patients with arthritis who did not implement advice given regarding wearing splints:

> Those that don't do anything come with their own attitude. I can see immediately when they walk in: I can see we're really not going to get anywhere.

Similarly, the personal trainers saw the lack of motivation in the attitude that clients showed in their verbal and non-verbal communication:

> I can tell before someone's paid me. I can tell if they're gonna get anywhere, just by the way they're talking, the way they are. I can tell how much effort they're gonna put in by the attitude, how much commitment they're gonna give me. (Jonny, personal trainer, cohort 3).

Attitude varied along a continuum from highly positive to highly negative. A highly positive attitude comprised of positive thoughts and feelings; anxiety was contained and managed, or embraced and used positively to drive activity participation. A positive attitude aligned to being strongly, or highly motivated and energised towards doing - a state of readiness to act. A more negative attitude consisted of negative thoughts and feelings. Anxiety had a negative effect on motivation and participation, as participants had more difficulty in managing anxiety. A highly

negative attitude was evident in an unwillingness to act (amotivation), and a decision *not* to do. Participants' attitudinal responses varied along this continuum, some having mixed feelings that made making a decision about whether or not to do activity difficult.

6.7.2 Contribution of other data

At the time of undertaking the focus group, I proposed that at the *highly positive* end of the attitude continuum, there was preparedness for activity participation, but with downwards movement attitude becomes closer to an unwillingness to participate. One focus group participant thought that it was difficult to differentiate between preparedness and willingness, and others agreed that the terms were problematic. Being prepared, or ready to do activity and exert effort was spoken about by participants, and preparedness was also a familiar term to me from the Theory of Creative Ability, although not defined. However, during the process of writing-up, I realised that using differing terms for opposite ends of the continuum was unwieldy and unnecessary. Being prepared or willing, are both expressions of motivation used interchangeably in everyday language. The concept of willingness had a strong presence in the data and more clearly expressed motivation (will), therefore this term was retained.

6.8 Section six: Signs of effort

Section one explained that effort is meeting activity with yourself and in so doing, exerting one's resources in activity participation; described as putting oneself into activity and trying. This section presents data concerning what this looks like. Data illustrate that effort was seen when there was active engagement in activity participation, signs of which were applying self in terms of thinking, managing and coping with feelings, overcoming problems, keeping going and the feeling of being taken from. Discovering this resulted from comparing interview data in response to questions such as "what do people look like when there is no effort and when there is effort?".

6.8.1 Active engagement in activity participation: thinking

As explained in section one, effort was described as putting-in and trying whilst actively engaged in activity. A sign of effort was therefore, active engagement, which was seen in the quality of participants' engagement in activity and the amount of time they spent on the activity. Participants that were actively engaged and therefore putting in effort were observed as active; could see them putting-in energy, putting-in themselves, trying. Conversely, participants that lacked effort were not actively engaged but appeared passive. That is, although they were doing

the activity they were not meeting the challenges by meeting the activity with themselves; no sense of real involvement, not actively participating, but *just doing*. There was a tendency to do less in terms of amount of activity participation and the quality of what they did, did not match the abilities that they possessed.

Many indicators of active engagement and therefore, effort occurred at the same time. They were observable in the participants' actions, for example effort was observable in how animated they were, facial expression, posture and body language. For example, leaning forward into the activity was a sign of interest, energy, applying self and trying. Thinking emerged as a major indicator of effort, described by many therapists as a definite sign of effort: thinking about what the activity was, what the aim or goal of doing it was, how to do it, and thinking about what they were doing e.g., focusing, paying attention, concentrating, decision-making, problem-solving. This is illustrated by the following extract from an interview in which the occupational therapist spoke of effort seen in patients in a group collage activity:

> Me: Who showed a lot of effort?
> G: With thought and insight, Stuart had a good effort - put in a lot of thought - this is the key: thought about things before doing it. He put in effort to think and not just go through the magazines and take any picture.....with regards to instructions for the end product, the product was not 100% perfect but you know what they can give to you and if they are internalising what you're asking of them, you can see that effort - they are taking it in, thinking about it rather than just randomly doing it.
> Me: Rather than just randomly doing it?
> G: Are they concentrating, focusing on what they are doing? On aims of the whole thing? Can I do better? Am I concentrating or not randomly just sticking pictures? It takes a lot of effort to think about what you are doing, why you're doing it, how and what will the end product be and to internalise why you are doing it.

Stuart had insight and good thinking abilities, so showing that he was using those, using what he had the capacity to put in, was a sign of active engagement and effort. Thinking as a sign of effort was also evident in giving due care and attention to what they were doing. This required motivation as well as abilities, because paying attention is not an automatic behaviour, but motivated. That active engagement required motivation as well as functional abilities, is illustrated in the following extract which describes patients making fabric bags for retail in a shop. One lady was not actively engaged but the others were:

> Her body language is slumped back in the chair, looking around the room during the task because she is well able. She has a chat, laid-back. It feels like she's bored and has just come for a chat. The others actually wanted to engage. Not taking pride in her work, but waning quickly. Compared with the others who were putting in effort, they also chatted but their focus and attention would be on the task, they would be actively choosing the buttons and thinking about whether it looked okay but she would just sew on any button. It is to sell in the shop, so they'd ask questions - "do you want particular colours?" - their eye contact was good, they were animated. They'd be more engaged - there was more effort in making the product into what we wanted it to be. But for her - there was no decision to apply herself and she didn't care whether the bag was good enough for the shop or not. The body language was different - they were leaning over the table, there was an energy about it which this woman didn't show. (Mandy, OT, cohort 2).

The lady of concern in the above had the ability to do the activity but there was no sign of her actively applying those abilities into doing the activity. This was conveyed in her posture, actions and body language. Those participants that were putting in effort were thinking about what they were doing, but this lady was not. For example, *"they would be actively choosing the buttons and thinking about whether it looked okay but she would just sew on any button".* Use of the word just conveys lack of thought, and was frequently used when participants described activity participation for which there was no effort, often expressed as just doing something.

The lack of thought about whether her product looked okay, suggests absence of doing the activity with care and attention, which were also key indicators of effort**.** Care and attention were evident in the activity participation of all but the lady of concern in the group; they appeared to care about and have interest in what they were doing. The bag was to be sold in a shop, therefore the quality of the end product should matter to the lady, but it did not appear to be of importance to her. This is evident in her not caring about it and not having any pride in what she had done. As signs of effort, care and attention were linked to doing activity right, properly or well to the best of one's ability. It was not about doing something well in terms of being talented or doing things perfectly, but wanting to do something to the best of one's abilities and showing this through trying:

> effort is trying to do it to the best of abilities. (Sally, OT, cohort 2).
> effort....some people will try hard and get it to the best they can. (Ruby, OT, cohort 1).

Wanting to do something to the best of one's abilities was to do with motivation. Lack of motivation was seen in some participants' activity participation, showing itself as a lack of thinking, care and attention. This is illustrated in an occupational therapist's account of a staff nurse attending an exercise therapy session:

> Me: what does lack of effort look like?
> The nurse - had a go for a bit and then stopped. Posture - sat back, slumped, called forward, stopped moving or doing anything, just sat there. Not light and alert but quite heavy posture, rooted to chair. It was a lack of interest, I could see it in her posture. And when she was doing it she was throwing her arms around any old how, not looking around to see how to do it. She wasn't taking time to think "is my body doing it?" - she wasn't doing it right. Others in the session were depressed and they did remarkably well, they did it properly. She wasn't looking to see the correct way of doing it, wasn't trying, didn't see the point. (Sally, OT, cohort 2).

From the moment of starting an activity, participants showed varying strengths of effort which reflected varying strengths of motivation. How positive or negative participants' attitudes (motivation) were towards the activity participation, was evidenced in the way that they went about the activity. Those that expressed a positive attitude were motivated to do the activity and tended to show interest and eagerness to participate; they were animated, alert and focused, and consequently looked actively engaged in the activity. Those that had a negative attitude were the opposite: disinterested, bored, lacked active engagement, slumped in posture, lack of eye contact, lacking in focus, lacking in concern of thought about the activity, or their thoughts appeared to be elsewhere: "half there, half somewhere else" (Mandy, OT, cohort 2). Participants with a highly negative attitude did not participate at all or stopped participating after a short period of time. These variations in effort are described in section six as strengths of motivation expressed in strengths of effort: no effort in the comfort zone and minimal through to maximum effort.

6.8.2 Active engagement in activity participation: overcoming challenges

Thinking as a sign of effort also involved overcoming challenges that arose whilst engaged in activity:

> Effort - the amount of thinking someone puts into performing something, how much difficulty they find in doing, and working around how to overcome those difficulties. Accepting challenges and meeting those challenges when it is a challenge. When there is something they find difficult, being able to work through frustrations. Trying things out, working through things and thinking through things. Finding different ways. If things aren't working as people might anticipate it's going to, then finding another way of doing it to get to where they want to be. (Kate, OT, cohort 2).

Overcoming challenges was a sign of effort, because it involves trying i.e., trying new ways of doing things, applying oneself and exerting effort in order to do something new or more than could do before. This is illustrated in the following quote regarding when demands seem greater than one's abilities, to try anyway:

> A client that I had, boy who was in a fire. The burns meant he did not have proper fingers but stumps, but he does everything. He overcame obstacles. So, even at the edge of your current ability, do you still 'do'? There is a sign of effort. (Emma, OT, cohort 1).

As in this extract, lack of ability did not necessarily mean that there was a lack of active engagement in participants, because strong motivation could drive them to overcome problems and actively engage despite the challenges. However, overcoming challenges required a degree of functional ability itself. Not all participants had the functional ability to overcome challenges whether through problem-solving skills or other abilities. Hence, the important factor was that if the person had the motivation and functional capacity to overcome challenges, then using those abilities to overcome them was a sign of effort.

Overcoming challenges required the employment of motivation and functional abilities in order to keep going through persistence, perseverance or endurance as signs of effort:

> The gentleman I saw this morning, walking with the frame, unsteady on his feet, very frail and physically not in great shape. A nurse came with me, holding on to his hips and it took 10 minutes to get into the interview room. I was so impressed with him-it was painful for him, but he still cooperated with me and walked all this way. He got stuck at joints and

things and yet he didn't complain or grumble but kept going. That was a tremendous show of effort. (Sally, OT, cohort 2).

For someone who finds it difficult to understand and to learn something, for him to persevere [on a new activity] for an exceptionally long time will definitely be an indication for me that is putting in effort. (Tanya, OT, cohort 1).

Conversely, not keeping going, but giving up was a sign of lack of effort. Giving up was a sign that there was not the motivation to keep going; a sign of giving in prematurely. This was different to stopping activity participation because one did not have the functional ability to continue. In the latter, resources had been depleted too much to continue and therefore effort had run out, or abilities did not match the demands of the activity. Therefore, whether or not there was effort, was not indicated by whether or not participants did the whole activity to completion, nor by the duration of activity participation in itself. Rather, a sign of effort was how much of the activity people did considering their abilities in relation to the demands of the activity. For some participants, they had the motivation to put in effort to start an activity and actively engage in it, but they did not have the functional abilities to do what the activity demanded of them, or to overcome problems. What was seen, was effort being put in until they could no longer engage because they did not have the resources to continue – the effort had run out. This was most clearly described by therapists who worked with people with severe learning disabilities:

They may be motivated to come along to a session but they may not engage for the whole session. I think effort is about your fatigue levels, your tolerance, your momentum and being able to maintain that momentum: the intensity you can put into something. It can be challenging for them because of their autism. Their social deficits impact on their performance. It's often difficult for them to sustain effort, because it's confusing for them to follow your instructions and relate to others and to have awareness of the activity. They might engage for a short while, but not go beyond that. (Keith, OT, cohort 2).

Therapists working in mental health services also recognised when effort could not be sustained due to the demands being too great for individuals' abilities:

If a task demands of the person, the effort is there if the demand is within their reach..... If it was too much beyond her, she wouldn't have stayed, the effort would have been too much. It [demands on concentration] was a bit beyond her and she needed support to bring her back to the task, to concentrate. But it [concentration] was short lived and

> sporadic.... The effort for her was struggling with concentration - it was an effort to stay in the room, but it was short lived. (Mandy, OT, cohort 2).

It was clear in these instances that even if there had been strong motivation for the activity participation, this would not have been sufficient or adequate. There had to be motivation together with adequate ability for effort to be sustained.

6.8.3 Active engagement in activity participation: managing and coping with thoughts and feelings

A sign of effort was managing and coping with thoughts and feelings. From data across the sample it emerged that in order to be able to do a challenging activity, it can be necessary to manage any negative thoughts and feelings evoked by it i.e., manage and cope with the challenges on an emotional level. When faced with activity that was perceived to be very challenging, it was common for participants to describe feeling anxious, insecure or threatened by the challenges due to uncertainty about whether doing the activity would be satisfying or successful. Therapists relayed examples of patients who were anxious because they perceived that they lacked ability to do activity, or thought that doing the activity may be an unpleasant or a painful experience. In these instances, in addition to participants verbally expressing reluctance or hesitation about doing the activity, therapists described seeing distress or anxiety in patients' facial expression and body language. I also observed this.

The therapists were of the view that at these anxiety-provoking times, deciding to do activity despite the anxiety required effort in itself. This view was also expressed by one of the church ministers:

> It can be scary if it's something that is a totally new situation and demanding one - there is effort to overcome the fear or emotion. (Mitch, church minister, cohort 3).

Getting to the position of deciding to do the activity seemed to require two functions: managing negative thoughts and feelings so they did not overwhelm or disable participants, and coping with those thoughts and feelings i.e., tolerating them. In so doing, participants overcame anxiety or other negative feelings, enabling them to make a decision for activity participation (described as *getting motivated* in section three). Therapists perceived this to be an indication of effort.

As previously indicated, effort and motivation were linked. Motivation was influential in the process of managing and coping with feelings because there had to be motivation to try the activity despite having negative feelings about it:

> You're getting effort when.... it's about when determining new behaviours about which they may feel insecure, but when their motivation is sufficient to overcome the anxiety associated with whatever you're asking them to do. Sometimes you can see that people are ready to move forward and you can present them with an opportunity to do that through a challenge. But for a long time they're not able to do that. Then suddenly for some inexplicable reason that's not very obvious, they're prepared to take that step; they will try. They have overcome the anxiety in order *to do*. For example, I had a patient who was a very competent person; she ran a house and a business, then she had a major depression. Her anxiety around being able to cook and run a home was absolutely extreme...all she could see was that she was no longer able to do it. So, with this belief that she was completely incapable, overcoming that extreme anxiety in order to make even the tiniest step forward was a tremendous sign of effort. (Paula, OT, cohort 1).

6.8.4 Taken effort

In response to the question "how do you know there has been effort?" participants described the subjective feeling that doing the activity had taken something out of them or from them. There was the sense that effort did not only occur when they decided to exert effort, but it was also taken from them by the activity demanding, therefore drawing on their resources. i.e., it drained them. Jake, a church minister talked about the effort involved in his work:

> It doesn't take the expenditure of physical energy, it's not like physical hard work. The thing that it depletes, it drains, is concentration. So after a service, that engagement with worship and praying, I'll go home and feel washed out, my mind will be blank - it's taken something. (Jake, church minister, cohort 3).

As for Jake, many participants experienced a sensation of effort draining or being emptied out of them due to 'putting in' or 'giving' effort to activity participation. This was particularly reported by participants involved in sport, physical training, or who had physically demanding jobs. They were aware of a 'take up' of their resources in activity participation. This required them to gauge their ability to put in effort, sustain effort until the end of the activity, and predict and manage the effects of effort being depleted. This was particularly described by the gravediggers and road

workers who, due to having to dig the ground by hand daily, were aware that their physical resources were being gradually depleted over the course of the working week. Being physically fit and well practiced at meeting the demands and challenges of the job, they did not usually perceive their work as effortful. However, when the demands of the job increased due to prolonged adverse weather conditions, it became effortful and they were aware of their resources being drained out of them. They had to manage their effort in response to how much effort was being taken out of them, so that they did not run out of effort before the end of the week. Even when the job was not unexpectedly demanding, the gradual depletion of their physical resources as the week progressed meant that despite their physical fitness, the job became effortful towards the end of the week because their reduced physical abilities did not match the physical demands of the work. Hence, there was a sense that over the course of the week, the job had taken their energy and resources from them.

What was taken, correlated to the resources demanded by the activity. For example, those that did very physical activities or found physical activities challenging due to compromised physical abilities, spoke of activity taking their physical resources. For example, a road worker whose muscles and joints suffered as a consequence of many years digging the roads stated:

> It takes everything physically. I go home and I'm aching. (Simon, road worker, cohort 3).

The subjective experience of physical effort was easily described by participants, but how it felt to have mental resources taken was more difficult to express in concrete terms. One participant expressed this as "*a sense of being played out*" (Matthew, church minister, cohort 3). The taking of resources left participants feeling fatigued or exhausted, which they understood to be a sign that they had exerted effort. Some therapists that worked with people with physical and mental health problems, looked for fatigue as a sign that effort had been exerted:

> Mental energy and physical energy or effort - those things we can see. So if I'm looking at my client I'm looking at behaviours that would indicate that effort has been taken out, that there is fatigue mentally or physically. Sighing, strained or tense, shifting of seating position - I look at all those things, so what I'm proposing to you is that I am looking at effort. (Cath, OT, cohort 1).

The degree of fatigue felt, was considered by some participants to be an indication of how much effort they had exerted. The amount of time that it took to recover resources that had been

depleted was an indication of how much effort had been exerted. This is illustrated by a gravedigger who talked about how he knew whether the week had been effortful at work by how long it took to recover:

> There's definitely something to do with recovery. I know that if I recover in three hours, that's not been a big effort. If I was unable to get back to normal in three days I couldn't work the next two days - that would have been a massive amount of effort taken out of me. (Arnold, gravedigger, cohort 3).

Motivation was depleted, reducing when there was insufficient functional ability or resources to do activity. This was best expressed by a church minister in talking about how he feels after Sunday services, which demanded a great deal of concentration and focus:

> What I don't want to do in those times is concentrate - not have any demands, even like deciding on whether we should go out for lunch. I want someone to make that decision for me. So the concentration....that decision-making thing.....whatever is involved in making decisions is depleted. Also will power, volition. It is the ability to say *"yes, I'll do this"* and there is some effort in making a decision. It's hard to put into words. (Keith, church minister, cohort 3).

6.8.5 The quantity and quality dimensions of effort

Throughout the study, field notes and theoretical memos noted that the signs of effort had quantity and quality dimensions. When participants talked about how much effort was put in, this suggested a quantity of effort such as none, a little or a lot of effort. At first, I thought quantity was to do with how long someone did activity for. However, as illustrated in this section, how much effort there is, also has a quality dimension i.e., how well or intensely an individual applies himself in relation to what he is capable of exerting. Hence, a lot of effort could be short in duration but high in intensity of active engagement or trying hard. Equally, a lot of effort could be of less intensity but sustained over a long period of time. Therefore, effort seemed to have quantity and quality dimensions that were observable.

Quantity of effort was observable as the amount of resources exerted in relation to the amount of resources that the person had i.e., how much of the self was applied and exerted. The quality of effort was observable in *how* the person engaged with activity i.e., the signs of effort: active engagement, care or diligence, thinking, managing and coping with thoughts and feelings, keeping

going, overcoming challenges. The quantity and quality of effort reflected how much motivation and ability the person had i.e., the quantity and quality of motivation and ability.

6.8.6 Contribution of other data sources

In theoretical memos, I noted how active engagement appeared to be a sign of effort. Given that I was studying effort in relation to activity participation, I reflected upon the difference between participation and active engagement. Aware that the occupational therapy profession has debated the difference between these terms, I utilised this literature to clarify the meaning of engagement. Participation is defined as "involvement in a life situation" (World Health Organisation 2007, p. 129), and taking part in the social and physical environment in a motivated way (Almqvist et al. 2007). In contrast, engagement is defined more in terms of a motivated use of abilities (Wilcock 1993), the observation of sustained behaviours and use of time and abilities and interaction with the environment by using abilities and motivation (Almqvist et al. 2007). Yerxa (1980) asserted that engagement is subjectively experienced, but observable by others as the performance of activity and the subjective reaction to what it requires. Therefore, engagement as a sign of effort fits well with this study's conceptualisation of effort as the subjective experience of a motivated application of one's self, using resources in activity, and in response to its demands.

With respect to quantity and quality of effort, quality of motivation is mentioned by Deci and Ryan (2000), to reflect amount, or intensity. The term quality appears fairly randomly in various occupational therapy literature, such as Almqvist et al. (2007), who refer to quantity and quality of engagement in relation to amount of motivation.

6.9 Section seven: Zones of effort

This section presents data on the differing types of effort discovered in this study: no effort in the comfort zone, minimal effort and maximum effort. The comfort zone is conceptualised as an area within a person's abilities, surrounded by the *effort zone* in which minimal and maximum effort occur.

6.9.1 No effort in the comfort zone

During the study, my questions regarding when effort does and does not occur eventually led to the idea that there may be a boundary at which no effort turns into effort, or zones of effort. The notion of zones arose from participants talking about activity participation for which there was no

effort for them, which had occasionally been referred to as activity participation that was in their comfort zone. No effort in the comfort zone was quite distinct from the absence of effort when there was no activity participation. Regarding the latter, the absence of effort (no effort) was described by therapists as:

> no action to live – no engagement in the world. (Mandy, OT, cohort 2).
> no spark, no motivation. (Karen, OT, cohort 1).
> everything just happening to the person, around person; no participation, no engagement. (Kim, OT, cohort 2).

Activity participation done without effort in the comfort zone was devoid of challenges and done with ease. This was frequently expressed by using the word just:

> [the activity] was not at all effort, it was just fine. Just doing it as an activity of relaxation and some exercise and concentration. (Linda, patient, cohort 1).
> No effort is when I'm just reading [for leisure]. (Vince, patient, cohort 1).
> There's no effort when I'm just singing along with the congregation rather than singing as part of engaging in worship. (Matthew, church minister, cohort 3).

Activity participation in the comfort zone was that which had been done before and for which participants had developed adequate abilities. At one time, effort had been required, but once the activity was mastered it became no effort:

> You've already done it, you already achieved it and already stretched yourself. That's your comfort zone; you do it, you eventually do it routinely. (Kate, OT, cohort 2).

What was comfortable about activity participation in the comfort zone was noted in theoretical memos. In contrast to demanding activity that raised anxiety, there was no anxiety exhibited during activity in their comfort zone. Participants appeared emotionally comfortable because there were no demands or challenges, therefore no risk of failure. The absence of challenge was confirmed by participants:

> Comfort zone? That you're not having to make any effort; there's no demand on me. (Margaret, housewife, cohort 3).

> Comfort zone is when you perceive there is no physical or mental demands on you that are difficult. (Andy, swimmer, cohort 3).

Being comfortable or at ease was suggested by participants' lack of reference to feeling stretched or strained, which featured in descriptions of effort. Rather, activity participation for which there was no effort was described as:

> no brain strain. (Margaret, housewife, cohort 3).
> no mental battles. (Mandy, OT, cohort 2).
> I don't have to strain myself. (Ian, patient, cohort 1).
> don't have to strain yourself; more of a relaxing time. (Vinny, patient, cohort 1).
> not stretched. (Simon, runner, cohort 3).

As a sample group, the retired ladies undertook the most comfort zone activity participation. They did not find much activity participation effortful, because so much in their daily routines was in their comfort zone due to years of experience. They also limited taking on new activity, or that which was demanding, partly as a strategy of self-preservation i.e., not over doing it and causing ill health. One participant was actively pursuing learning computer skills as a new activity, but this sample group mainly did activities that were in their comfort zone. An aspect of comfort zone activity participation that made it comfortable, was that it was in some way pleasurable:

> once I've warmed up, I get into a place where it doesn't feel like I'm having to work at it - it doesn't feel effortful then, it feels comfortable and "oh, I can do this, it's really nice". (Melissa, runner, cohort 3).

Unlike effortful activity participation, comfort zone activity participation could potentially be done without thinking because one knows how to do it:

> you get to a bit when you're not really thinking about it, your mind's just somewhere else and your body is just doing what it's meant to do. (Simone, runner, cohort 3).

It was evident that participants had a sense of, or gauged what was and was not in their comfort zone. This raised questions in theoretical memos such as: *Zone suggests a boundaried area but where is it in a person? What is outside of that boundary and how do you know that you've gone outside your comfort zone?* Participants explained that comfort zone boundaries effort:

> effort is when there is a the lack of comfort. Comfort is normal time when you don't input effort. Everyone has a comfort zone and when you go outside of it, that's the definition of effort. (Andy, swimmer, cohort 3)
>
> When one is working within your ability, you're probably working within your comfort zone and probably using the skills you have available, but it's when you're moving out of that comfort zone that effort is really happening and important. (Paula, OT, cohort 1)

6.9.2 Maximum effort

The current study sought to discover what maximum effort is, therefore many participants were asked whether it exists as a phenomenon and to describe it. Participants stated that there is such a thing as maximum effort and its purpose was to achieve something that the participant really wanted i.e., was strongly motivated for. Maximum effort was particularly mentioned in relation to bringing about a significant change in the self, thus it required stretching or striving to further oneself, as described in section one. Therefore, maximum effort was described as doing as much as one is capable of, trying your best and using everything.

Doing as much as one is capable of meant using all the resources that one has:

> Maximum effort is.....You use everything that you've got whether it's physical strength, balance, coordination - on the edge of your ability. (Simon, roadworker, cohort 3).
>
> Maximum effort is using yourself, putting your energy and resources into the activity - using the most that you have. (Melissa, runner, cohort 3).
>
> Maximum effort is using everything: physical, emotional and cognitively: all their resources. (Tanya, OT, cohort 3).

Using everything was so that participants could exert themselves as best they could in order to do their best:

> Maximum effort is doing the very, very best that you are mentally and physically capable of. (Kate, OT, cohort 2).

This meant doing at the edge or borders of ability:

> The moment you function on the borders, you're actually functioning on maximum effort. (Cath, OT, cohort 2).

Activity participation at the border of abilities was experienced as being stretched to the fullest extent. Similar to explanations of effort, what was stretched were mental, physical and motivation resources, the latter being highly influential because maximum effort was described as requiring a strong commitment, desire or dedication. When exerting maximum effort, all of participants' resources were consumed by the activity participation, described as:

> Maximum effort is an absolute engagement of your skills, your abilities, your attention, concentration on a task that you're doing. (Mandy, OT, cohort 2).

Absolute engagement meant that potentially there is an inability to attend to other things, because all resources are taken up:

> Perhaps maximum effort means you can't do more than one thing at a time. It makes sense doesn't it - if you're putting all your effort into one thing, then you can't go off and half do something else. (Arnold, swimmer, cohort 3).

Because maximum effort meant using all of one's resources, participants stated that it could only occur for a limited duration because resources were being heavily drawn upon and drained, therefore they quickly run out. This was expressed as having used up every drop or ounce of mental and/or physical resources:

> Maximum effort is putting absolutely everything you've got into it - at the end of a race, collapsing. You've used every ounce of energy you've got…at the end of the race I had nothing, it was uphill and I had gone too fast; there was nothing left in my legs to give. (Melissa, runner, cohort 3).
>
> Maximum effort is the most effort that you're capable of at the moment and certainly some times on Friday at 5 o'clock when I finally finished preparing the sermon, that is felt like maximum effort. It's taken every drop of whatever I've been using to cross that finish line. (Jake, church minister, cohort 3).

A complete depletion of resources was a sign that maximum effort had been exerted. This was mainly described by participants that undertook very physical activity such as sports people, road workers and gravediggers. These participants also spoke of gauging how much effort was being exerted in order to avoid running out of it prematurely. This was described as managing effort. Gauging the quantity of effort exerted was difficult when doing a sport activity for which the participants were motivated to do well in or were seeking to stretch and improve their technique

or time. Being highly motivated for this seemed to distract their attention away from, mask or override their attention to how much effort they were using. Consequently, effort was difficult to manage and they found that they had put in maximum effort to a greater extent than they had realised:

> you only know that you've put in maximum effort when you get out [of the water] and you're really tired. The body is able to pump out drugs to mask tiredness so that probably masks maximum effort. I did a swim about a month ago. I got out of the lake and I found it really hard to stand. I couldn't do much for a minute or two. I was completely disabled for a while. (Martin, swimmer, cohort 3).

What would be one's absolute maximum effort was difficult for participants to approximate. There was the notion that human beings have greater resources than they realise and that these can be accessed if motivated enough to do more:

> But this maximum effort - I'm sure we can all do much more than we think. We are used to sitting on the sofa and watching TV; it's not part of our make-up these days to put in effort and maximum effort. Don't you hear these stories of pregnant mothers who can lift up the car in a car crash - so we can put in much more effort, so perhaps I'm able to put in more effort because I know there is much more in the tank. (Arnold, swimmer, cohort 3).

6.9.3 Minimal effort

In the process of describing effort, minimal effort was mentioned by many participants. As for maximum effort, motivation determined minimal effort, described as doing as little as possible and no more; putting in little thought. This was observable in the quantity and quality of effort put into meeting the challenges in activity participation. The following interview extract describes the difference between one participant (Kelly) exerting maximum effort and another (Sam) putting in minimal effort during an occupational therapy session that I observed.

Kelly had less ability than Sam. The activity was to create a paper mosaic (Fig. 6-5). The participants were given an A4 piece of paper with the outline of a flower printed on it. There were asked to fill in the flower petals and centre with small mosaic-like pieces of paper, by cutting pieces from magazine pages and gluing them onto the paper. Kelly followed the instructions until she ran out of effort, resulting in her taking short cuts by copying Sam who cut one single piece of

paper for each part of the flower. Kelly and Sam's end products (photographs below) are referred to in the extract:

> OT: To me, the [Sam's] end product is not much different to this one. But for Sam it was minimal effort. Kelly can do this only with maximum effort. I know Sam can do this with minimal effort. He did it - did it in the simplest way and quickest way possible. Time has something to do with it [effort] - how much time and effort you are willing to put in. For her [Kelly], it took her an hour - if he had taken an hour over it, it would have been a lot different.
> Me: if he had put maximum effort in, what would have been different?
> OT: It would have been the mosaic that he should have made. He didn't do what he was asked to do, and even what he did wasn't as neat as he could've done it even though his skills are fine – it wasn't a problem of lack of skills. He's capable of it but won't do it. This is just lack of effort. I see with her [Kelly], even if she puts in everything she has it will still look like this. (Fiona, OT, cohort 1).



Kelly's end product **Sam's end product**

Figure 6-5 Kelly and Sam's paper mosaics.

As suggested in the extract, to put in minimal effort was a conscious decision. Participants were aware of their ability in relation to the activity demands and decided how much of their ability in the form of effort, they would put into doing it:

> He gets to this point with minimal effort. He knows he can do it with minimum effort. He's got the skill and ability to create that product very easily without having to put a lot of

thought into it. He knows what his skills are and he knows he can do it. (Rachel, OT, cohort 1).

Minimal effort was limited in quantity and quality by choice: there was the ability to do more, but the person made the decision not to. Therefore, minimal effort represented a small amount of effort exerted in relation to the amount that was available to the person and which could be exerted. Thus, minimal effort occurred when there was a conscious decision to put in as little effort as possible; doing on the edge of the comfort zone. It was not activity participation in the comfort zone, because it did not have the characteristics of doing without thinking in a relaxed, enjoyable way. Rather, it was the minimal exertion of the self. The account of the lady making a bag in section 6.8.1 fits the description of minimal effort.

6.9.4 Contribution of other data sources

At the time of undertaking the focus group, I proposed that the term limited effort describes a limit on effort due to limited functional ability. As stated in 6.10.2, one participant thought that the proposed definition of limited effort was difficult to differentiate from minimal effort. This prompted me to return to the data, resulting in gaining a clearer conceptualisation of minimal effort.

The everyday use of the term comfort zone, provided additional data to compare with the field research data. In particular, mentions of being outside one's comfort zone featured frequently on television and during the 2012 Olympic Games. Reading about the point at which one experiences optimal challenges (e.g., Guadagnoli & Lee 2004), extended my thinking about zones of effort no effort, and where is the demarcation?

6.10 Section 8: Focus group findings

As discussed in Chapter Three (Methods), it is important that a grounded theory is understandable by 'laymen concerned' (Glaser & Strauss 1967, p. 237); is plausible, works and has fit (Glaser & Strauss 1967). Furthermore, when defining concepts it is extremely important to examine the extent to which they reflect everyday meanings and usage (Jorgensen 1989). Therefore, in phase two of this study, an on-line focus group was undertaken for the purpose of identifying the degree to which the emergent theory is plausible and provides an understanding of effort and maximum effort. The theory was presented and explained in stages, at the end of which participants were

asked a question about the plausibility and fit of key aspects of the theory. This part of the findings chapter presents the findings of the focus group, beginning with reporting on the sample.

6.10.1 Sample

A sample of six participants was sought, but at short notice one participant withdrew due to ill health. Two participants were unable to participate on the day due to technological problems, but a few days later they contributed by means of viewing and listening to the recording of the group. These participants made their contributions in writing, using a guide. A sample of the guide is in Appendix K. Therefore three participants participated in the live online focus group, and five participated in total consisting of occupational therapists in the UK and South Africa and members of the public in the UK (Table 6-3).

Table 6-3 Focus group sample.

Sample	Country	Number of participants
General public (phase one participant)	UK	2
Occupational therapist (phase one participant)	South Africa	1
Occupational therapist (phase one participant)	UK	1
Occupational therapist (new to the study)	UK	1

6.10.2 Findings

During the 75 minute presentation of the emergent theory, participants used thumb symbols () to indicate agreement or disagreement with what was being presented and discussed. No 'thumb down' symbols were used by the participants. Responses to questions about plausibility, work and fit were assessed using Onwuegbuzie et al's (2009) matrix for analysing focus group data (Table 6-4). There were three points of disagreement. The first was in response to question 3 (Table 6-4), regarding the fit of a summary of the characteristics of effort. Participant 2 (OT, South Africa) did not agree that a characteristic of effort is doing more than the minimum required by the activity and made clear statements to support the assertion that this is not a characteristic that can be applied to all people.

Leading up to question 7, I posited that there are degrees of attitude seen in the attitudinal response and that these could be conceptualised along a continuum from a highly positive attitude (preparedness), to a highly negative attitude of being unwilling. Participant 2 was of the opinion that preparedness and willingness were difficult to differentiate as having different meanings. There were comments from other participants to suggest that these terms were problematic,

although there was 100% consensus that there are degrees of attitude (Qu. 7). Participant 2 also did not agree with the definition of limited effort (Qu. 8); expressing the view that it was difficult to differentiate from minimal effort.

During the discussion of the theory, participant 2 suggested that there were two aspects of effort missing from the theory. First, was the notion that effort has three components: initiating effort, continuing effort and continuing effort to the point of completing an activity. Secondly, ability to be aware of changes either within oneself and/or in the external environment during activity participation, was perceived to be necessary for a person to be able to judge how changes effect the demands of activity participation, and also to gauge the effort required to continue or complete the activity. Lack of ability in these respects was perceived to potentially result in the person misjudging or been caught out by the effort required, subsequently having an unsatisfactory experience or outcome of activity participation.

Table 6-4 Findings in the matrix for assessing level of consensus in focus groups (Onwuegbuzie et al. 2009).

	Participant				
Focus group question	1	2	3	4	5
Qu. 1. Effort is not just doing, but the quantity and quality of how you do something. Does that fit?	A	A	A	A	A
So, whether or not something takes effort, is determined by the relationship between the person: ability, capacity and motivation, the demands of the activity, in the environment at the time. **Qu. 2.** Does that fit? Does that sound plausible to you?	A	A	A	A	A
When there is effort, the person is seen as engaged with or involved in the activity (connected to it by applying oneself to it). **There is doing more than the minimum required by the activity**, doing something with concern/care and/or doing something well / to the best of ability. Cognitive involvement: paying attention to the task, thinking about what you are doing, concentrating, focusing. The way that you know, is through the way someone does something – in their facial expression, posture, way of doing the activity – the quality of doing. **Qu. 3.** Does that fit?	A	SD	NR	A	A
Effort is also seen as meeting the challenges posed by the activity. This involves managing and coping with the challenges on an emotional level e.g., when there are difficulties, the doing is uncomfortable, there's a sense of insecurity or feeling threatened by the challenges, feelings of hesitation, anxiety, stress, frustration, confusion, distress, or excitement (more positive feelings). Meeting the challenges also involves overcoming problems or difficulties in a practical sense; using one's initiative, problem-solving, being creative., finding solutions. **Qu. 4.** Does that fit?	A	A	A	A	A
Meeting the challenges also means not giving up; showing endurance, persistence, persevering when it's difficult or in the event of failure; keeping going despite anxiety or problems. **Qu. 5** Do you agree with that?	SE	A	A	SE	A
There is a process of making a decision, weighing up and with the decision is an attitudinal response. **Qu. 6** Does this sound plausible?	A	A	A	A	A
Qu. 7 Do you think it is plausible that there is a scale of attitude from highly positive to highly negative in the decision made?	A	A	A	A	A
Definition of effort, minimal effort, limited effort. **Qu. 8.** Are these understandable and work?	A	SD	A	A	A
[Description and explanation of Maximum effort and maximum to the Max]. **Qu. 9** Does that sound plausible and fit?	A	A	A	SE	A

Key: A = Indicated agreement (i.e., verbal or nonverbal), D = Indicated dissent (i.e., verbal or nonverbal), SE = Provided significant statement or example suggesting agreement, SD = Provided significant statement or example suggesting dissent, NR = Did not indicate agreement or dissent (i.e., no response).

Having had the opportunity to discuss the theory, at the end of the focus group participants were asked "Is the theoretical framework missing something that you think is essential to understanding effort and maximum effort?" Participants 3 and 4 (members of the public) suggested that there needs to be consideration of how people manage effort over a period of time.
The focus group content was analysed using constant comparative analysis and writing theoretical memos.

6.10.3 Discussion

With the exception of question three, all participants agreed that the key aspects of the theory presented were plausible and had fit. The consensus of five out of five people in a focus group cannot be extended to mean that 100% of the population at large would respond in the same way. To make those predictions, quantitative research that is representative of the population being targeted and that can be analysed with some known margin of error, would be better suited. The non-response to question three by one participant may have been due to the fact that there was much discussion on this point, which may have made it difficult to participate or know when to use symbols indicating agreement or disagreement. The contribution of the issues raised by participants, have been acknowledged in sections 6.5.3 on gauging effort; 6.6.3 on awareness; 6.7.2 on willingness, and 6.9.4 on limited effort.

6.11 Conclusion

This chapter has presented the findings of the current study supported by raw data. The contribution of other data sources has been made explicit. It is evident that the findings are complex and extensive. Therefore, it is difficult to summarise the findings here, but in essence six main themes emerged: effort, effort in demanding activity participation, the decision-making process, awareness and decision-making, decision response with an attitudinal response, and signs of effort. With respect to the Theory of Creative Ability, several of the findings were compatible to it, a discussion of which is presented in Chapter Eight (Discussion).

Having presented the findings from Stages One and Two of the current study, this thesis now progresses with a chapter that reviews the literature on effort, followed by a chapter that discusses the findings in light of the literature.

CHAPTER SEVEN

Literature review

7.1 Introduction

The previous chapter on the findings of the study, was written prior to undertaking a review of the literature on effort, in order to remain open to fresh insights for discovery of effort, rather than being influenced by existing literature. This process of analysing findings before the literature review is often recommended in grounded theory research (Glaser 1992).

This chapter is presented in two parts. The first part presents a critical review of the literature on effort from a range of perspectives in non- occupational therapy literature. The second part presents a meta-synthesis of occupational therapy literature, in order to identify how effort is conceptualised by the occupational therapy profession, concluding that effort is poorly conceptualised and understood in the profession.
In the non occupational therapy literature, the term task is often used in preference to, or interchangeably with the term activity. To aid ease of reading, I have used the term task in Part One of this review, but the term activity as preferred in the occupational therapy profession, is used in the second part on occupational therapy literature.

Part One

7.2 Part One Introduction

This part of the literature review comprises numerous perspectives relevant to the study, and consequently covers a highly diverse range of literature. A broad range of databases were searched, including: Psych Info, CINAHL, EThOS, EBSCOhost, MEDLINE (Ovid) , OTSeeker, OTDatabase, Emerald, ProQuest Central, PsychArticles, PsychNET, PsychTests. Initial search terms were: effort, effortful, effortless, exertion, energy, expenditure, minimal effort, minimum effort, maximal effort, maximum effort, comfort zone, resource(s). Further search terms were identified as a result of reading relevant literature e.g. sense of effort; resource capacity.

It emerged that literature related to effort is extremely problematic as it is interdisciplinary, situated across academic fields, and spread across a broad range of disparate and distinct strands of research. This results in fragmentation.

The review begins with the conceptualisation of effort as use of function or mobilisation of resources, which emerged as a dominant conceptualisation in effort research. This is followed by a section that discusses the conceptualisation of effort as a cognitive-energetical construct, informed by the only theory to explain what effort is. This leads to debates regarding where the sense of effort is situated within human beings, and what it consists of. Debates deal with questions regarding whether there are mental and physical senses or varieties of effort, and what the subjective experience of effort entails. The next section focuses on motivation theorists' conceptualisations of effort as intensity of motivation. An overview of key theories of motivation is presented, indicating key determinants of behaviour that may influence effort, which is inferred in behavioural terms. This section also presents two effort-related theories that explain determinants of effort and how it may be managed. The final section explains how effort is perceived as varying in amount as minimal and maximal effort, and why determining amount of effort is a difficult task. Finally, the salient points of the review are brought together into a conclusion.

7.3 The conceptualisation of effort as use of function or mobilisation of resources

There can be no doubt that effort is a commonly used term in everyday language. Dictionary definitions of effort include: and a putting forth of strength (Chambers English Dictionary 1990); conscious exertion of power; something produced by exertion; trying or effective force as distinguished from the possible resistance called into action by such a force (Miriam-Webster Dictionary 2015). The literature on effort however, predominantly lacks definitions of effort. The main body of research literature on effort is not research into what effort is, so much as research into the effect of various factors on performance, mainly without defining effort. As a researcher seeking to understand effort, this was bewildering. What eventually brought clarity to this issue, was resource theory, which Hockey (1997) asserts is central to all theories of effort. I reviewed literature on the notion of resources in response to reference to it by participants in the findings.

Resource or capacity theory assumes that the patterning of human performance cannot be fully understood without reference to a concept of resource (Hockey 1997). The term resource is defined as "an internal mental input required by the intrinsic demands of the activity" (Kahneman 1973, p.7), and "any internal input essential for processing" (Navon 1984, p. 217). Essentially, resource is most commonly associated with mental operations for processing tasks and

performing them (Kahneman 1973; Navon 1984; Otto et al. 2013; Hockey 1986), and which are limited at any point in time (Kahneman 1973; Sanders 1997). Wickens (1984, 1991) proposed that there are resources for spatial, verbal, perceptual-cognitive and motor responses to tasks as dimensions that are generally recognised to be the architectual components of information processing (Sanders 1997), while Fleishman et al. (1984) isolated more than 50 mental abilities to account for human performance. Conversely, Sanders (1997) asserts that resource views can render resources as aspecific, being somewhat vaguely to do with processing information about the demands presented by a task or the environment, in order to determine how to respond. The use of mental operations to do tasks is associated with effort, therefore effort is often referred to as mental effort, synonymous with mental resources (Kahneman 1973).

Sanders (1997) suggests that the notion of resources has been a major theoretical construct to explain limits on human performance. The concept of resources developed out of engineering metaphors that sought to explain the man-machine problems of the mid 20th century (Sanders 1997). The advancement in engineering for the development of machines and computers influenced the application of engineering principles to ideas of limited workload capacity of the human operator (Sanders 1997), such as the mental performance limits of attention and memory (Broadbent 1958). The prevalent idea was that mental resources is a fixed capacity, until Moray (1967) illustrated that the mental apparatus is a more flexible resource comprised of a store of mental functions (multiple resources) that could be distributed between different activities in response to competing demands. This has endured as the core meaning of mental resources (Hockey 2013). From a resource theory perspective, the function of effort is to mobilise resources or energy[1] (Kahneman 1973; Navon 1984; Hockey 1997, 2013; Sanders 1997), hence effort is also referred to as mental effort (e.g., Kaplan 1995; Belmont et al. 2009; Hockey 1997; De Rivecourt et al. 2008; Otto et al. 2013; Zijlstra 1993), and mental energy (Hockey 2013).

The conceptualisation of effort as the mobilisation of resources, may make sense of the fact that much of the research on effort, as stated previously, focuses on the effect of various factors on performance. A comparison of these studies led to realising that they infer that effort is conceptualised as use of functions or resources. For example, in a study on the effects of stuttering during storytelling on the mental effort of listeners, mental or cognitive effort refers to listening, comprehension and recall (Panico & Healey 2009); whilst in a study on driving, mental effort is sustained attention, vigilance and alertness (Tejero & Choliz 2002), or level of arousal

[1] see Hockey (1997) and Sanders (1997) for reviews of resource theory

(Verwey & Veltman 1996). These studies infer that effort is the use of resources in response to the demands of activity participation. Without definitions of effort in these studies, this can only be an assumption, but as shall be illustrated in the remainder of this review, the concept of limited resources or capacity of human beings, the use of which draws on energy, is central to many discussions of effort.

7.4 Cognitive-energetic constructions of effort

A conceptualisation of effort asserts that it is a cognitive-energetical construct outside of conscious control. Kahneman's (1973) capacity model, as the only theory of effort to explain what effort is, suggests that effort is a stimulus-response to fluctuating demands by tasks for the cognitive resources of attention and information-processing. That is, increasing demands on attention result in an increase in arousal in order for the human system to pay attention to the task. As a stimulus-response to demands, the increase in arousal and attention in order to process the task, is the output of resources as effort. That is, *in its physiological manifestations effort is a special case of arousal* (Kahneman 1973, p. 4)[2]. Thus, Kahneman (1973) proposed that effort, attention, capacity and resources are synonymous. Due to the human system having limited resources or capacity, Kahneman (1973) introduced the notion that effort has an energetical cost to the system. That is, arousal, attention and information processing are resources or energy that are being drawn upon, evidenced in increased heart rate and pupil dilation (Kahneman 1973). Effort is also therefore, considered to be synonymous with energy (Kahneman 1973). From a cognitive-energetic perspective, the function of effort is to mobilise resources or energy (Kahneman 1973; Navon 1984; Hockey 1997, 2013; Wright & Brehm 1989).

As a reader, I found Kahneman's identification of effort as synonymous with attention, capacity, resources and energy problematic, particularly when used interchangeably, which Kahneman advocated. For example, Kahneman (1973) states: "the terms *exert effort* and *invest capacity* will often be used as synonymous for *pay attention*" (p. 8). This not only makes effort difficult to understand, but the meaning of exertion is also ambiguous. Furthermore, understanding the function of effort is problematic due to the interchangeable use of terms, particularly when effort is referred to as synonymous with resources or energy, but also that effort is the mobilisation of resources and energy. That is, effort appears to be the mobilisation of itself. This explanation of effort was difficult to fathom.

[2] For arousal theory, see Kahneman (1973), Teigen (1994), Venables (1984).

Kahneman's conceptualisation of effort as an energetical construct has been tested and supported by many experimental studies using psychophysiological measures of pupil dilation, eye blinking, oxygen up-take and/or heart rate (e.g., Beatty 1982; Roscoe 1992, 1993; Svensson & Wilson 2002; Papadelis et al. 2007; Tejero & Choliz 2002; Cnossen et al. 2004). Determining maximal effort has been identified by measuring maximal responses, e.g., Voss and Sandercock's (2009) study of maximal effort in children during a 20 metre running test in a natural setting, evidenced by peak heart rate.

However, physiological responses may not solely reflect effort. Pupil dilation can have other primary organismic functions, such as modulating light (Gendolla et al. 2012), and heart rate can be affected not only by the sympathetic system, but parasympathetic activity that can mask or reverse relevant sympathetic effects thought to indicate effort (see Wright & Kirby 2001; Kelsey 2011). Furthermore, quantitative methodology does not enable researchers to explore anomalies or unexpected findings in physiological measurement data, limiting understanding of effort. Therefore, this type of research does not extend understandings of effort beyond energetical conceptualisations. What is more, these quantitative studies predominantly consist of measuring performance in laboratory conditions during often meaningless or tedious tasks. This type of research cannot capture the complexity of effort as it is experienced, nor the factors that influence effort in the usual course of daily living and activity participation.

The hypothesis that effort is associated with arousal and attention has however, developed. Arousal is the readiness of the brain for perceptual input (Aston-Jones & Cohen 2005), optimum levels of which facilitate attention toward stimuli and the processing of it (van der Linden 2011). As such, arousal may be viewed as essential for energisation, described by Brehm and Wright (1983) as a process that prepares the human organism to undertake an effortful task. Energisation is a term used interchangeably by some authors with effort, from the perspective that the function of effort is to mobilise, or energise resources. In terms of the human system being prepared for effort, arousal has been found to significantly influence whether effort is exerted (Van der Linden 2011).

A question that repeatedly arose as a reader of the effort literature, was whether effort is a conscious or unconscious process, and related to this, whether effort is expended or exerted. Kahneman (1973) maintained that effort is a stimulus-response, determined by the demands intrinsic in specific tasks and is not therefore, under conscious control. There is some support for this idea, by virtue of the fact that arousal and attention is most evident in relation to new or novel tasks, because these demand mental resources such as attention and information-processing

(Kahneman 1973; Hockey 1986; Shiffrin & Schneider 1977; Martinsen et al. 2007). This is what Kahneman (1973) refers to as the attention-pull of tasks. Hockey (1997) and Kahneman (1973) subsequently describe effort as focused attention on a task. In contrast, known tasks can be done with automatic processing, therefore hardly require any effort (e.g., Deheane et al. 1998; Kahneman 1973; Shiffrin & Schneider 1977; Chatzisarantis et al. 2007). Contrary to Kahneman's view, this does not necessarily mean that effort occurs without conscious control, as effortful performance can require conscious executive control i.e., cognitive processes that control perceptual and motor processes for goal-directed behaviour (Miller & Cohen 2001). Assuming that an individual has awareness of something, s/he can consciously perform numerous operations in relation to it i.e., make a conscious mental effort (Deheane et al. 1998). This includes focusing attention, which when applied for a prolonged period on tasks, incurs a high degree of mental effort (Robsinson & Morsella 2014).

Cognitive and energetic explanations of effort are brought together in an energetical-control framework called the regulatory-control model (Hockey & Hamilton 1983; Hockey 1986; Hockey et al., 1989; Hockey 1993; Hockey 1997), developed to explain the effects of stress on performance. This model provides a theoretical explanation of how cognitive resources are managed through the conscious mobilisation of mental effort in order to maintain effective performance under demanding conditions (Hockey 1997). Hockey proposes that when there are competing demands on resources, individuals consciously decide upon a strategy to protect performance for task goals that are a high priority, but this incurs a cost, which is often a decrease in resource allocation to less important tasks (Hockey 1997). Support for this hypothesis has been found in studies that found that when presented with high levels of competing demands during a task, the task assumed to be of primary importance is maintained while other tasks receive less attention (e.g., Hockey et al. 1998). Although such studies support the conceptualisation of effort as under conscious control, neither the regulatory-control model, nor supporting research extends understandings of effort beyond its function to mobilise resources.

In conclusion to the research into effort from a cognitive-energetical perspective, this research provides evidence of the possible physiological underpinning of behaviour and effort. However, the conceptualisation of effort is somewhat limited to physiological, metabolic calibrations in relation to demands. This is not aided by the fact that this literature is devoid of effort definitions, but appears to follow Kahneman's (1973) approach of relying on attention, arousal, resources and energy synonyms. Whether effort is expended or exerted, and what the difference may be, is not an obvious consideration by authors, who tend to use the terms effort investment, expenditure

and exertion interchangeably, whether discussing voluntary or involuntary attention and effort. For a reader, the lack of clarity on this issue combined with the interchangeable use of several terms, makes it difficult to attain a clear understanding of effort. Furthermore, the experimental approach to studying of effort can be viewed as somewhat reductionistic, viewing human beings in a mechanistic way as mechanisms and systems. Gaining qualitative research into effort would extend understanding of effort beyond physiological explanations, and add depth to the field of research.

7.5 Sense of effort

Effort, as an energetical construct, is connected and functionally related to the energetical construct of fatigue - effort being the precursor to fatigue (Hockey 2013). Attempts at defining fatigue has proved problematic, due to the inability to either specify precisely what fatigue is, or measure it (Desmond & Hancock 2001; Hockey 2013; van der Linden 2011). Desmond and Hancock (2001) suggest that because we all have experience of energetic concepts, such as stress, attention and mental workload, we consider them real entities (Polanyi 1958), and bootstrap definitions to our experience of reality. This has made a scientific definition of fatigue elusive. This is further supported by the fact that despite the many years of study, there is no scientifically mature theory of the origins and function of fatigue (Hockey 2011). Interestingly, Desmond and Hancock (2001) suggest that the problems in defining fatigue are true for all energetic constructs. This may explain why definitions of effort are missing from the literature.

Traditional theories of fatigue conceptualise it as depletion of energy or tiredness as a result of effort (Hockey 2013); a view shared by laypeople, whilst clinically it has specific significance as a symptom (Desmond & Hancock (2001). Fatigue is also known as the sense of effort (Hockey 2013). A key debate in the literature is where fatigue, or the sense of effort is situated in human beings, and is to do with the question of whether effort is sensed both physically and mentally i.e., are there both physical and mental varieties of effort? On this issue, fatigue can refer to bodily tiredness following physical activity (Van der Linden 2011). Traditional theories of physical fatigue (e.g., Conlee 1987; Edwards 1983), suggest that feeling tired from doing physical work (effort), is attributed to the over use of large muscle groups or of limitations of the cardio-respiratory mechanisms that deliver oxygen and glucose to the muscles. Hence, fatigue has been traditionally viewed as the sense of physical effort generated via the feedback of afferent sensory receptors stimulated in response to fatiguing locomotor muscles (Hockey 2013). A competing perspective is that the sense of physical effort is independent of afferent feedback and generated as a signal in the brain consciously or sub-consciously (Marcora 2009; Meeusen 2009; Perrey et al. 2010).

Several current models, some supported by neurophysiological evidence, suggest that the brain generates a feeling of effort before performing an activity, and that this is critical to dictating motor drive and output (Lafargue & Franck 2009; Tucker & Noakes 2009; Marcora & Staiano 2010). Currently, many models of physical exercise focus on the central nervous system as regulating performance, and conceptualise fatigue as a sensation (Noakes et al. 2004; Lambert et al. 2005; Tucker 2009; de Morree & Marcora 2010; Swart et al. 2011; Christian et al. 2014).

Further to its association with physical activity, fatigue can also refer to a lack of energy not specifically connected to exhaustion in any specific physical modality (Van der Linden 2011), referred to as mental fatigue (Chaudhuri & Behan 2004). Mental fatigue is more difficult to define than physical fatigue because it is a complex multi-faceted state that involves mood, cognition and behaviour (Hancock & Desmond 2001). This is illustrated by differing explanations of mental effort and fatigue in the literature. For example, mental fatigue can result from the mental effort of sustaining performance on cognitively demanding tasks, as is commonly experienced, for example, after an examination or at the end of a hard day's work at a desk job (Van der Linden et al. 2006). In this respect, fatigue is commonly conceptualised as the depletion of energy (Hockey 2013), as a direct consequence of task performance and effort (Hancock & Desmond 2001; Hockey 2013).

In fatigue research, effort is researched using measures of performance, during which effort manifests in performing tasks at an acceptable pace and maintaining quality of performance in terms of accuracy of task performance (Hockey 2011, 2013). A decline in performance is a sign of reduction in effort due to fatigue. However, performance measures of effort are problematic, because differences in ability and strategy use means that people perform differently and with varying amounts of effort (Locke & Latham 1990a, 1990b). Studies that seek to establish that higher task demands (workload) result in higher degrees of effort through performance measures, may fail to consider that there are many task situations in which overall task performance is only minimally affected when less effort is invested (Hockey 1997). This gives large flexibility in performance and therefore individuals may not be exerting the amount of effort that researchers assume. Furthermore, a study by Earle et al. (2015) found that fatigue does not always result from task performance, because fatigue is not a consequence of task demands *per se*, but of the effort committed in meeting the demands. In this respect, this study supports the conclusion reached from Hockey's (2013) comprehensive review of the fatigue literature, that fatigue is not best conceptualised as a depletion of energy. Hockey (2013) suggests that the historical use of the energy metaphor to explain fatigue makes it difficult for other explanations to come to the fore, but alternative explanations need to be explored.

There are philosophical discussions to consider regarding the sense of effort. Maine de Biran (1805), a French philosopher argued that the feeling of effort was the fundamental condition of the self (Lafargue & Franck 2009). That is, that "the feeling of effort gives to willed actions their specific perceptive content" (Lafargue & Franck 2009, p. 277). Hence, the hypothesis discussed earlier that effort is centrally generated or located, is not new. Several philosophers at the beginning of the 19th century proposed that the perception of muscular force occurs prior to muscular contraction (Lafargue & Franck 2009), and introduced notions such as sensation of innervation, sensation of effort or sensation of motor emission, meaning the existence of a perceptive content to effort originating from volition (Smirmaul 2012). Lafargue and Franck (2009) suggest that to be able to understand this view well, it is necessary to consider that there is always a degree of effort in an action, in terms of voluntary motor commands having to be processed in the brain in order to arrive at a decision regarding how big a movement to make. Consequently, "the subjective experience of willed effort, that is the feeling of exerting a certain amount of effort in order to energise the body, is probably the key component of the feeling of initiating an action and an important element of the sense of volition" (Lafargue & Franck 2009, p. 278).

Several authors have suggested that effort is a feeling state linked to emotion. There are a number of ideas about this. Hockey (2013) suggests that the growing sense of effort during activity participation reflects strain when demanded upon. This is assumed from biological research, which indicates that activity in the adrenocortical system can be interpreted in terms of strain on adaptive processes (e.g., Hockey et al. 1998). From this perspective, prolonged strain results in the feeling of stress (Hockey et al. 1998; Hockey 2013). Along a similar vein, Otto et al. (2013) state that mental effort is spending energy while performing any sort of mental task, consequently experienced as a feeling of strain.

Damasio (2000) offers a different view, perceiving that effort can be experienced as a background emotion. Damasio (2000) suggests that people regulate themselves in day-to-day life, the process of which causes an emotional response to our experiences. For example, feeling satisfaction from invigorating activity, or the effort of a difficult decision. These are background emotions as opposed to primary emotions to do with mood. According to Damasio (2000), in response to activity participation of daily life, we have background feelings of anticipation or dread; of tension or relaxation, and of fatigue or energy. Along a similar vein, van der Linden (2011) suggests that fatigue may be considered a *stop-emotion* for interrupting motivational direction. A core component of fatigue and central to decisions about effort, is the reward-cost trade-off between

the likely rewards of engaging in an activity versus its energetical cost (van der Linden (2011). If these (implicit) decisions are negative, then there is strong motivation to stop the ongoing effort, thus the conceptualisation of fatigue as a *stop-emotion*. Van der Linden (2011) argues that the decision to stop effort may not always be conscious, due to the sense of effort involving complex and dynamic interactions of neuromodulatory pathways to do with desire, mood, and therefore, motivation.

Continuing the discussion of emotion, Hockey (2013) suggests that the sense of effort is an emotion due it being related to elements of anxiety, discomfort, loss of engagement with a goal and boredom, although no research evidence is offered to substantiate this idea. However, support may be found in descriptions of the lack of these feelings during performance that is effortless, or in the comfort zone. White (2008) defines comfort zone as "a behavioural state within which a person operates in an anxiety-neutral condition, using a limited set of behaviours to deliver a steady level of performance, usually without a sense of risk" (p. 3). In contrast, outside of the comfort zone activity participation in the optimal performance zone is that which feels challenging, uncomfortable, raises anxiety and arousal, and is effortful (Hughes 2014; Kennedy & Fortune 2014; Cubit & Lopez 2012; Knightbridge 2015). Similarly, Senninger's (2000) comfort zone is an area of experience in which things are familiar, comfortable and safe, surrounded by a zone of increasing challenge bordering a surrounding zone of high anxiety. There is not however, research into the difference in feeling states in relation to demands within and outside of the comfort zone, only anecdotal reports (e.g., Hughes 2014; Kennedy & Fortune 2014; Cubit & Lopez 2012; Barker et al. 2010; Parmenter & Thomas 2015; Marshall 2003; Cain 2011; Chudnoy 2011; Randall 2011; Bridges 2001; Knightbridge 2015).

Despite indication that the sense of effort is a feeling state or emotion, the subjective experience of effort does not appear to have been researched qualitatively. Rather, the subjective experience of effort has been quantified in visual analogue scales used in effort research alongside physiological and/or performance measures of effort e.g., Panico and Healy (2005), Papadelis et al.(2007), Belmont et al. (2009), Hockey et al. (1998). All scales quantify effort with a numerical scale, and some have added descriptors. These scales have been explored for this review from the perspective that they could provide clarification on the effort construct. Some scale descriptors describe effort in quantity e.g., no effort to very high effort (Belmont et al. 2009); extremely low to extremely high effort (Panico & Healy 2005). That effort is a sense, is suggested by the inclusion in Papadelis et al's (2007) scale of *how weak or strong the sensation of movement*, and *more or less fatiguing* during a task. Effort as active participation may be what is suggested by Hockey et al.

(1998), who asked participants to rate how involved they had been in the tasks performed in the study. These scales suggest various dimensions or characteristics of effort, which, not developed out of research indicate assumptions of common, shared understandings of what effort is, particularly as effort is neither defined in these studies for participants, nor the reader.
In the absence of effort definitions, there is an obvious risk in working to assumptions of what effort is. For example, in a study on the sense of effort during cycling, Christian et al. (1995) state that effort is task difficulty, whilst also describing effort as "how hard the body or mind is working" (p. 143), which are not the same phenomena. Equally, Fervaha et al. (2015) use a non-researched VAS to rate task difficulty as an indication of effort in a study on decision-making. However, task difficulty and effort are not necessarily the same thing (Robinson & Morsella 2014), as shown in the experience of flow (Csikszentmihalyi 1990; Csikszentmihalyi et al. 2005), when doing highly difficult activities can feel effortless if task demands are matched by abilities. A further indication that effort and task difficulty are not the same, is that a recognised problem with using self-report scales is that research participants can have difficulty in differentiating task difficulty from the experience of effort, causing problems in measurement of perceived effort (Gendolla et al. 2012).

Further confusion regarding effort is evident in Christian et al.'s (2014) study, in that conceptualising effort as exertion during cycling, they used a scale of physical discomfort. However, Marcora (2009) warns that rating perceived exertion in association with the discomfort experienced during physical exercise, confuses effort with muscle pain, temperature or thirst. The latter have their own specific neurophysiological mechanisms and can be differentiated from perception of effort (Marcora 2009).

Commonly used validated VAS are also limited in terms of clarity of the effort construct. The Rating Scale Mental Effort (RSME) (Zijlstra 1993) for measuring mental effort or workload (e.g., Otto et al. 2013; Verwey & Veltman 1996), only quantifies effort along an axis e.g., 2 corresponds to *not effortful,* 58 to *rather effortful,* and 113 to *awfully effortful.* A popular visual analogue scale is Borg's (1970, 1982) Ratings of Perceived Exertion (RPE) conceptualises effort as varying degrees of exertion, or intensity of effort in relation to specific activity. Effort is quantified along a scale of continua from extremely light exertion (minimal effort) to extremely hard, the latter described as “for most people this is the most strenuous exercise they have ever experienced” (Borg 1970, p22). Although the terms used are purported to be readily interpreted by research participants (Borg 1998), one can argue that the RPE and other visual analogue scales cannot adequately capture the subjective experience of effort due to the fact that descriptions of effort are imposed on research respondents, assumes that effort is experienced in the prescribed terms. These are

unlikely to be adequate descriptions of subjective experiences considering that this is a uni-dimensional scale attempting to measure a multi-dimensional construct.

The RPE attempts to identify when maximal effort has been exerted, as the final point of measurement on the scale. This term is not accompanied by a descriptor. Although one might think therefore, that this construct is open to individual interpretation, one could argue that it is unlikely to be selected due to the influence of the statement for *extremely hard*, previously mentioned. In fact, Borg states that maximal effort is a hypothetical construct. This view restricts understanding and exploration of what constitutes maximal effort. An additional limitation of using visual analogue scales for self-assessment of effort, is that their use requires that the individual has capacity to monitor and integrate information about his energetical state to form a coherent impression, make it available for self-evaluation and do so quickly and intuitively (Otto et al. 2013). This is capacity that not everyone is likely to have, therefore this approach does not allow for differing capabilities and for effort to be expressed in different ways.

The RPE was developed with the view that it is impossible to study effort and fatigue solely from a physiological perspective, as both have psychological factors (Borg 1998), hence Borg defines perceived exertion as "being an expression of the individual's total physical and psychic reaction to exertion" (p. 4). The content and meaning of perceived exertion have derived from what Borg (1998) describes as common sense and personal experiences, as well as empirical studies. Experiences such as effort, breathlessness, fatigue, aches in the working muscles, feelings of warmness and so on help to capture the concept (p2). However, Smirmaul (2012) argues that in combining both the physical sensations of exercise and psychological/psychic effort into the term *perceived exertion*, has resulted in confusion regarding the sense of effort. Equally, there is concern that the terms effort and exertion are used interchangeably, without clarity of their meanings (Smirmaul 2012).

In response to these concerns, recent research has investigated whether physical and mental effort are distinct experiences. Swart et al. (2012) reduced the RPE to only its scale regarding physical effort and developed the Task Effort and Awareness scale to measure mental effort. The study found that effort is not sensed until intense physical activity reaches the point of threatening homeostasis. The sense of effort leads to a decision regarding whether to increase, sustain, reduce or stop effort. In a decision to sustain or increase effort, there is conscious mental (psychic) effort for this to occur. Thus, it was concluded that mental effort is sensed separately to the physical feedback.

As a reader, the question of what is the difference between expenditure and exertion is still unresolved. The differentiation in the aforementioned Swart et al. (2012) study between physical and mental sense of effort, may indicate the difference between expenditure and exertion - expenditure perhaps being the physical sense of effort, and the exertion the mental commitment to sustaining or increasing effort. This is how I conceptualise the difference, but there is no clear attempt in the literature to combine the expenditure and exertion constructs in order to understand effort.

7.6 Effort as intensity of motivation

The energetical construction of effort also has relevance to the study of motivation, of which there are many definitions including that it is the direction of energy towards a goal (Deci & Ryan 2000). Subsequently, processes relating to effort are of concern to the study of motivation science, due to its influence on the initiation and direction of behaviour, and the need for effort to persist and attain goals (Richter & Wright 2010; Earle et al. 2015; Eccles et al. 1998).

Effort has been described as a proxy for motivation (British Psychological Society 2009); motivation driving effort (Grolnick & Ryan 1987). The relationship between effort and performance or behaviour is evident in mainstream motivational theories and comprehensive models of human goal striving (e.g.,, Ach 1935; Bandura 1986; Carver & Scheier 1998; Gollwitzer 1993; Heckhausen 1977; Kuhl 1985; Locke & Latham 1990a, 1990b; Ryan & Deci 2000). To review the extensive literature on motivation is beyond the scope of this chapter, which out of necessity focuses on the associations made in the motivation literature between motivation and effort. In reviewing the literature it became evident that there are numerous influences on effort that overlap and inter-relate with each other. To separate these is necessary in order to communicate their association with effort to the reader, but it is recognised that doing so does not accurately represent the complex inter-relationship between effort and key motivation constructs. There follows an overview of key determinants of motivation and effort: 1) arousal and activation; 2) beliefs, values and perceived costs; 3) intrinsic motivation; 4) interest, and 5) attitude.

7.6.1 Arousal, activation and effort

Similar to the association made earlier in this review between arousal and effort from a physiological perspective, arousal is also related to initiation of action from a motivation perspective. Arousal is necessary for an individual to be able to move towards something, and sustained arousal is needed in order to make a decision for doing (van der Linden 2011). This view

is evident in the definition of Williams and Burden (1997, p. 120) who explain that motivation is "a state of cognitive and emotional arousal, a state which leads to a conscious decision to act and gives rise to a period of sustained intellectual and/or physical effort". Sustaining effort to achieve the goal, is to persist.

Activation of neural pathways has been associated with subjective states of alertness, high energy, intrinsic motivation and exertion of effort (Van der Linden 2011). In particular, wanting something as a drive for action, is directly linked to effort - wanting is defined as "the level of effort one is willing to expend to gain what is liked" (van der Linden 2011, p. 152). Wanting is associated with dopaminergic-based processes that underlie the motivation or desire to seek, or pursue something that one wants (van der Linden (2011). Dopamine pathways play a role in activating the organism to optimise chances of attaining a desired goal or reward (van der Linden 2011). Research has shown that intensity of motivation and performance is influenced by affect - that positive associations with an action prepares the individual to mobilise additional resources and spend extra effort on a task (Arts et al. 2008).

In this discussion is mention of the concept of activation, which is the degree that one is energised in behaviour - the effort exerted (Deci & Ryan 2000). Activation is considered to be an observable aspect of motivation as the degree to which goals are pursued with enthusiasm, persistence, diligence and intensity of engagement, which infer effort (Deci & Ryan 2000).

7.6.2 The influence of beliefs, perception of value and cost on effort

Bandura (1997) focuses on the importance of efficacy and human agency perceptions to motivation. Self-efficacy is confidence in a person's ability to organise and perform a given course of action to solve a problem or accomplish a goal, and focuses on expectancies for success (Bandura 1997). According to Bandura, efficacy expectations are the primary determinant of performance in terms of activity choice, goal setting, persistence and willingness to expend effort. However, increased self-efficacy does not necessarily result in increased effort. A high degree of self-efficacy is also not in itself enough for performance, as these rely on requisite skills or abilities, and sufficiently strong motivation to succeed (Schunk & Usher 2012; Bandura 1994, 1997; Weinberg & Gould 1995).

Conceptions of effort and ability and their relations to achievement or success, change during developmental stages and are important to understanding one's self and others' behaviour (Stipek & Mac Iver 1989). The development of an understanding of the relationship between effort and ability has been researched extensively, particularly by Nicholls (1978) who suggests that effort and ability are logically interdependent - one concept implies the other. That is, ability refers to

what a person can do, and it is only in evidence when there is optimum effort (Nicholls 1978). This implies that ability limits the extent to which effort can increase performance, and equally effort can only improve performance to the limit of ability (Nicholls 1978). Over the course of development, Nicholls established that beliefs about the relationship between effort and ability changes, from believing that effort improves ability, to realising that the impact of effort on performance is limited by ability limitations i.e., high ability enhances the effects of effort on performance, and low ability limits this effect.

Weiner's (1985) Attribution theory maintains that the individual's causal attributions (explanations) for outcomes of achievement striving, determine subsequent achievement performance. In this respect, attributions are key motivational beliefs (Weiner 1985). The most important achievement attributions according to Weiner (1992), are ability, effort, luck and task difficulty. Each are identified as either controllable or uncontrollable. According to this model, ability is an attribute that is stable and uncontrollable, however, Bandura (1991) asserts that through experience, individuals can construe ability as an acquirable skill that can be developed through effort. This is reflected in the belief that the harder one tries, the more capable one becomes (Bandura 1991). With this belief, errors in performance are attributable to inexperience in doing the activity, which can be rectified by effort. A high degree of effort that results in increasing successes can therefore, enhance self-efficacy beliefs (Schunk & Cox 1986; Bandura 1991, 1994).

Bandura and Dweck (1985) identified that one's beliefs about intelligence or ability influenced the degree to which effort is put into education-based tasks. Students can hold an entity theory of intelligence, perceiving intelligence as a fixed entity that cannot be changed. They can also hold an incremental theory of intelligence, believing that it is an attribute that can be developed through intellectual efforts. The authors found that the theory possessed influences attitude towards effort. Those with an entity theory, belief that effort is a measure of your intellectual ability. If you have to work hard at something, they believe that it means you must not have high ability in that area. Conversely, if you have high ability, you shouldn't have to work hard. So, for them, in applying effort you risk showing that you lack ability. Those with an incremental theory of intelligence do not see effort as a way of measuring their intellect, but as a tool for learning. For them, high effort is what turns on people's ability, allows them to use it to the fullest, and ultimately increases their ability. Effort therefore supports and creates ability (Bandura & Dweck 1985; Dweck & Sorich 1999).

Beliefs also feature in modern expectancy-value theories (e.g., Feather 1988; Eccles 1987; Eccles et al. 1983; Wigfield & Eccles 1992, 2001), based on Atkinson's (1964) expectancy-value model. These theories relate achievement performance, persistence and choice directly to individuals' expectancy-related and task-value beliefs. Eccles et al.'s (1983) Expectancy-value model of achievement states that beliefs about ability are individuals' broad beliefs about competence in a given area, and expectancies for success are beliefs about how well one will be able to do a specific task. Competence-related beliefs are to do with the question "Can I Do This Task?" When answered in the affirmative individuals tend to try harder, persist longer, perform better and be motivated for more challenging tasks (Wigfield et al. 1997; Wigfield & Eccles 2000, 2001).

In this model, choices for activity participation are considered to be influenced by characteristics of tasks perceived to be either positive or negative. One's task choices are assumed to have costs associated with them, because one choice can eradicate an alternative. Therefore, key determinants of choice are the task's relative value and one's perception of likelihood of success in the task.

Four task-value components are proposed. 1) Attainment value is defined as "the importance of doing well on a given task" (Wigfiled & Eccles 2000, p. 72). Attainment value has much to do with the importance to an individual of doing tasks in order to verify his self-schema (Wigfield & Eccles 1992; Rokeach 1979; Feather 1988). 2) Intrinsic value is to do with enjoyment from doing the activity, or interest in it. 3) Utility value is to do with how a task fits with future goals. Finally, 4) cost refers to the individual's assessment of how deciding to do one task restricts doing others; potentially has an emotional cost (e.g., performance anxiety, fear of failure), and incurs a cost in terms of effort.

A similar theory of the process of weighing-up effort-reward costs, is Vroom's (1964) Expectancy Theory of Motivation, which explains why individuals choose one behavioural option over another in terms of whether the expected outcomes of performance are perceived to be worth the effort exerted. The theory explains that individuals can be motivated towards goals if they believe (expectancy) that one's effort will result in the attainment of performance goals (rewards). The strength of motivation for a behavioural option is a matter of how these factors relate to each other in terms of whether doing something is considered to be worth the effort (van Vegchel et al. 2005).

7.6.3 The influence of intrinsic motivation on effort

When the only reason for performing an act is to gain something outside the activity itself, such as passing an exam, or obtaining financial rewards, the motivation is likely to be extrinsic.
A dominant motivation theory in the literature is Deci and Ryan's (1985, 1991, 2000) Self-determination theory (SDT). This theory is centered on the belief that human beings show effort, agency and commitment in their lives in order to satisfy psychological needs, and that these aspects of behaviour are enhanced when intrinsically motivated (Deci & Ryan 1985, 1991, 2000). Deci and Ryan propose that there are three psychological needs fundamental to health and well-being: competence (Harter 1978; White 1959, 1963), autonomy (deCharms 1968; Deci 1975) and social belonging and connectedness (relatedness) (Baumeister & Leary 1995). Behaviour to meet these needs can be intrinsically or extrinsically motivated. Intrinsic motivation is when the reason for doing something lies within the activity itself; it is intrinsically valued, self-authored and endorsed, and generates interest and enjoyment (Ryan & Deci 2000). The characteristics of intrinsically motivating activity include: novel, interesting, possessing an engaging degree of challenge, and/or having aesthetic value (Ryan & Deci 2000). Deci and Ryan's research indicates that intrinsic motivation energises behaviour, evidenced in an attitude of willingness that reflects an inner acceptance of the value or utility of a task (Deci & Ryan 2000a); enhanced interest, excitement, confidence, enhanced engagement and performance, persistence (Deci & Ryan 2000), creativity, vitality (subjective experience of energy) (Ryan & Frederick 1997), energetic or vigorous performance (Purcell 1982; Deci 1992). These behaviours and characteristics may infer effort.
When extrinsically motivated, the reason for doing something lies outside the activity, such as monetary gain, or being externally controlled i.e., having to do something, rather than it being an autonomous, personal choice (Deci & Ryan 1985, 1991, 2000). Being extrinsically controlled in a dissatisfying way is more likely to result in a lack intention, a feeling of being drained of energy, or amotivation. Activity is more likely to be undertaken with an attitude of resentment, resistance or unwillingness (Deci & Ryan 2000a). These behaviours and characteristics may infer less effort than for intrinsic motivation. When comparing intrinsic to extrinsic motivation, intrinsic motivation is innately energising, generating the greater degree of motivation (Deci & Ryan 1985, 1991, 2000), suggesting greater effort.

Effort also features in another intrinsic motivation theory called flow theory (Csikszentmihalyi 1975). Csikszentmihalyi (1988) defined intrinsically motivated behaviour in terms of the subjective, emotional experience of being engaged in an activity. Csikszentmihalyi (1990) found that activity which is neither over challenging nor under challenging, can result in a highly satisfying and enjoyable experience known as a state of flow. In Csikszentmihalyi's (1990) theory,

highly challenging activity refers to activity that optimally uses an individual's abilities, rather than feeling demanding in terms of strain. From this perspective, highly challenging activity matched with a high degree of skill in the individual can enable sustained performance (Csikszentmihalyi & Rathunde 1992; Csikszentmihalyi et al. 2005). Interestingly, the flow state is an experience of effortless performance. This is despite its occurrence when an individual pays a lot of attention, has a high degree of involvement and deep concentration (Csikszentmihalyi & Rathunde 1992). This contradicts the views outlined earlier in this review that activities requiring attention are effortful. However, interestingly, Csikszentmihalyi's findings do not contradict fatigue research, which has long established that self-initiated mental activities that are of interest, congruent with personal goals, evoke enthusiasm, and particularly when perceived as play, do not generate feelings of fatigue (Hockey 2011).

7.6.4 Influence of interest on effort

Another factor thought to influence effort is interest, which is also to do with feelings (Renninger 2000). The motivating influence of interest has been recognised by many motivation researchers (e.g., Alexander et al. 1994; Schiefele 1999; Deci & Ryan 1985, 1991, 2000; Hidi & Harackiewicz 2001; Renninger 2000). Schiefele (1999) suggests that interest involves the subjective importance of an item or activity, and feelings that things or activities evoke, such as the feeling of being stimulated by, or involved in the activity. When free from biological urges, energy and attention is often directed to interesting activities (Deci 1992; Tobias 1994), and research has shown that interest in particular activities facilitates greater involvement, closer attention, longer persistence, greater learning and enjoyment than when there is no interest (e.g., Schiefele 1991, 1996; Ainley 1994, 1998; Renninger et al. 1992). Again, the suggestion is that former behaviours may infer effort.

7.6.5 Influence of attitude on effort

Further to Deci and Ryan's (2000a) references to attitude in relation to intrinsic and extrinsic motivation and effort in section 7.6.3, the relation between attitude and effort is proposed in other theories. Attitudes are mental dispositions expressing positive or negative evaluations and feelings towards people and objects in the external world, as well as towards one's self (Fishbein & Ajzen 1975; Ajzen & Fishbein 2000; Petty et al 1997; Loersch et al. 2007). Gardner (1985) suggests that attitudes, together with desire are the principal determinants of how much effort an individual expends to achieve a goal. The Theory of Planned Behaviour (Ajzen 1985; Ajzen & Madden 1986) proposes a relationship between attitude, intentional behaviour and effort by

describing how people process information before engaging in intentional, volitional behaviour. Intention is the formulation of future behaviour leading to a decision to act towards meeting a goal, also referred to as intentional effort (Pink 1991;Deci & Ryan 1985, 1991). According to Ajzen (1991), and Ajzen and Madden (1986), attitude is evident in one's intentions, which indicate how hard people are willing to try - how much effort they are planning to exert in performance. The more positive the attitude and stronger a person's intention, the more the person is expected to try, and hence the greater the likelihood that the behaviour will be performed.

Research to test and extend the theory, has used measures of effort that reflect willingness to participate in an activity prior to doing it, compared with self-reports of perceived effort afterwards. For example, Bagozzi and Kimmel's (1995) study of volitional vs forced intentions to do physical exercise, required participants to report the effort they had exerted in a sense of maintaining willpower, energy, trying and discipline, measured on scales ranging from *tried not at all* (1) to *tried very hard* (7). These types of studies provide support for the hypothesis that positive attitude, intentional behaviour and effort are related (e.g., Chatzisarantis et al. 2002), but do not provide understanding of effort beyond notions that positive attitudes translate into performance.

Thus far, the potential link between effort and key determinants of motivation has been proposed in extensive literature and mainstream motivation theories. The latter are not however, theories of effort *per se*. Further to Kahneman's (1973) capacity model, only two other theories regarding effort could be identified. This literature review now progresses to discuss two theories of effort, both of which situate effort in relation to motivation.

7.7 Motivation Intensity Theory (Brehm et al. 1983)

Out of interest in the psychological aspects of the mobilisation and maintenance of energy, Brehm et al. (1983) developed Motivation Intensity theory. Brehm et al. (1983) draw on the idea that effort mobilisation follows the difficulty law of motivation (e.g., Ach 1935; Hillgruber 1912), which states that effort is mobilised proportionally in relation to perceived task difficulty. The underlying principle is of energy conservation in that effort is not exerted in any greater amount than that required by the task. Drawing on the idea that effort has the function to deal with obstacles during the pursuit of goals, it is proposed that the greater the obstacles or difficulty encountered in pursuit of a goal, the greater the amount of effort mobilised. Theoretically, tasks perceived as easy will result in an *intention to try a little* (low energisation), *tasks that are difficult will result in*

an intention to try hard (high energisation), and tasks perceived as extremely difficult or impossible will not be attempted, therefore no effort is expended (Brehm et al. 1983, p. 23).

Whether or not effort is mobilised, is consciously decided based upon the attractiveness of the goal. Central to ideas that effort is under conscious or motivated control is the theoretical notion that during human performance there are reserve amounts of effort that can be mobilised as extra effort for tasks (e.g., Brehm et al. 1983; Brehm & Self 1989; Kalsbeek 1968; Schmidtke 1976; Hockey 1997; Hockey 2013). It is proposed that individuals will expend effort only to the degree that it is needed, and only when effort is predicted to result in a reward or benefit that justifies the effort. As long as goal attainment is perceived as both possible and worth the effort, the amount of effort mobilised should correspond to the task difficulty. Therefore, Brehm et al. (1983) proposed that resource allocation is best understood when differentiating between the upper limit of what people are *willing* to do to achieve a purpose/gain a benefit (potential motivation), and what they *will* do to achieve the purpose (motivation intensity). This idea was also put forward by Kalsbeek (1968) and Schmidtke (1976) who refer to a willing to spend capacity, with a reserve supply of effort for meeting unexpected demands. The variability of effort is proposed to be influenced by the degree of attractiveness or value that the task goal has to the individual, a factor traditionally thought to determine motive strength. The mobilising function of effort therefore, relates to the intensity of motivation.

This theory is concerned with the determinants and consequences of the mobilisation of energy (Wright & Brehm 1989), not establishing what effort is *per se*. However, attempts have been made to quantify effort intensity through research. This includes the use of self-reports of effort intention prior to performance, and/or self-assessment of effort afterwards (e.g., Tzetzis et al. 2001; Roets et al. 2008; Efklides et al. 2006). However, these self-report studies are problematic due to being highly vulnerable to self-presentational influences, whereby individuals over or under-estimate their abilities and predictions of effort, particularly under test conditions (Rhodewalt & Fairfield 1991; Pyszczynski & Greenberg 1983). Furthermore, Blascovich et al. (2003) raised concerns that theory requiring a rational-economic calculation of the amount of effort one is willing and able to expend in relation to task difficulty, negates to recognise that decision-making, particularly under uncertainty of task difficulty or value, engages unconscious or automatic decision-making processes as well as conscious ones (Blascovich & Mendes 2000). Certainly, discussions presented in this review of the complexity of effort and its mechanisms, supports these concerns.

Cardiovascular measures have been favoured on the premise that effort either leads to energisation, or is an element of the process of energy mobilisation (Gendolla et al. 2012). From this perspective, studies have operationalised effort intensity as cardiovascular response in the context of task performance, based on Obrist's (1976) proposition that the influence of the sympathetic nervous system on the cardiovascular system is proportional to effort or task engagement (e.g., Wright et al. 1986; Wright et al. 2007). The limitations of this type of research have already been discussed in section 7.4.

7.8 Motivational control model of executive control, effort and fatigue (Hockey 2013)

Hockey (1993, 1997) first developed the compensatory control model of performance regulation to account for the observed stability of performance when under stress i.e., in the midst of unpredictable and/or uncontrollable events. Hockey proposed that stressors such as noise or sleep deprivation produce a state which may be detrimental for optimal task performance, and that effort has a control function that determines whether to exert effortful responses in order to prevent performance falling below a satisfactorily level. This is based on Hamilton et al. (1977) and Teichner's (1968) hypothesis of compensatory environmental control of stress states, which propose that regulation of action involves cost-benefit decisions about the use of effort against the value of task goals. Based on this premise, Hockey proposed that an effort budget is allocated to performance according to the value of the task goal, self-assessment of how much resources or effort is in reserve, and whether exerting the effort will be worth the energetical cost.

When operators are confronted with increased task demands, they can either invest more effort, or adjust the performance targets. In the latter case, operators may decrease the desired level of accuracy or speed; use less demanding strategies; or ignore subsidiary activities (Hockey 1997). Research supports this hypothesis - protection of the most important tasks during driving (Cnossen et al. 2004).

Although influenced by the work of Kahneman (1973) who assumed that effort is determined only by the demands of the task, Hockey posited that effort is not only a responsive function, but is under motivational control occurring through the operation of feedback mechanisms. In a refinement of the compensatory model of performance, Hockey's (2013) motivational control model of executive control, effort and fatigue, presents a psychological model of fatigue that embodies the critical phenomena of effort, choice and feelings (Hockey 2013).

According to the model (Fig. 7-1), in relation to an active goal (G), a routine control loop is in operation when there is an absence of demands, and performance involves undertaking well learned skills, often in an automatic way. This performance is assumed to require no active effort. During performance effort is monitored by the action monitor. Competing demands on attention by interrupting events (cognitive, somatic, environmental) are detected by the performance evaluation controller, which perceives increasing demands for effort, and signals to the effort regulation system for an increase in the effort budget according to the value of the goal. When assessment of the costs is that it is too high compared to the benefits of sustaining effort, effort may not be increased but maintained, reduced, or effort is ceased completely.

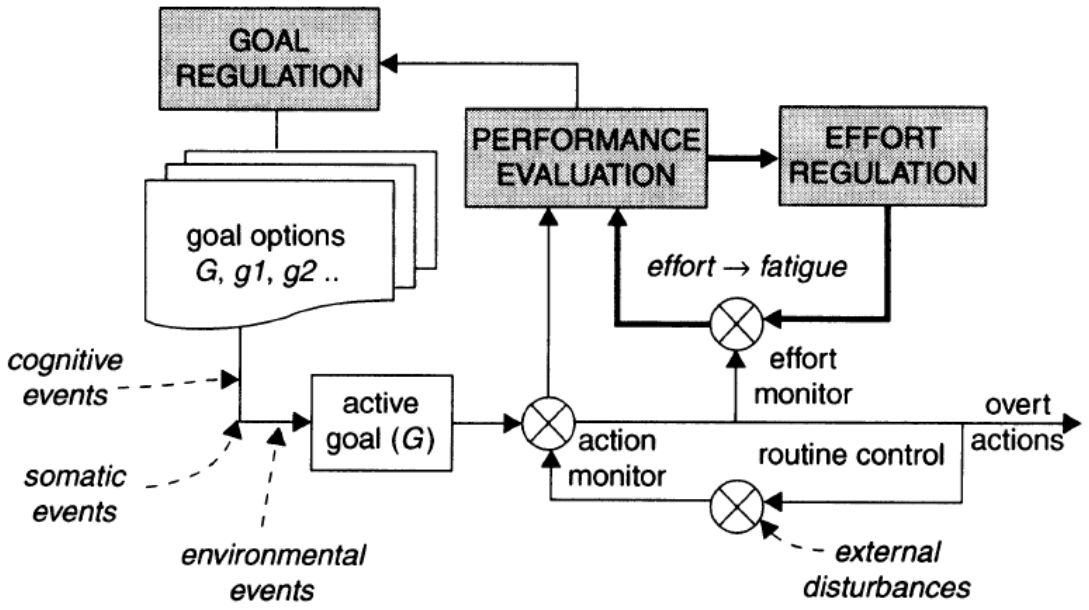


Figure 7-1 Motivational control model of executive control, effort and fatigue (Hockey 2013, p. 144).

Although Hockey's (2013) model has similarities to Brehm et al. (1983), in that it proposes that effort is consciously allocated according to effort-cost evaluations, Hockey brings a new dimension by integrating ideas regarding fatigue with effort regulation. Within an effort-fatigue loop, a sensed need for greater effort reflects the same affective state as a sensed increase in fatigue, therefore Hockey (2013) maintains that as general characteristics of a whole system, fatigue and effort are difficult to differentiate. Hockey's (2013) reference to fatigue and effort as affective states illustrates the theoretical underpinning of his view that fatigue is an emotion, mentioned earlier in this review. Accordingly, the question arises as to whether effort is also an emotion. This is not clear. Rather, effort is defined as "the psychological state that corresponds to the regulatory costs of implementing and maintain actions" (Hockey 2013, p. 149), and reflects the

subjective assessment of whether some activity needs to be carried out, or continued, and gauging effort expenditure (Hockey 2013).

In terms of the contribution that this model makes to understanding effort, this cannot adequately be established, partly because the model is so recent, but also because Hockey's work is situated within fatigue research rather than research into effort. Although fatigue and effort are considered integrated constructs, fatigue is the result of effort rather than effort itself. Therefore, fatigue research is not adequately relevant for this review. What is interesting is that according to Hockey (2011), despite extensive research there is no scientifically mature theory of the origins and functions of fatigue, but considerable confusion about its conceptualisation (Hockey 2013).

In conclusion regarding literature on effort as motivation intensity, motivation theories, supported by research identify that effort and motivation are inter-related. Effort is inferred by behaviour such as undertaking tasks with a positive attitude, with persistence and trying hard. However, as indicated by the fact that motivation research can only make assumptions about effort in behavioural terms, motivation theories including Brehm et al's (1983) Motivation Intensity Theory, only identify determinants and consequences of effort. That is, they do not study or provide explanations of effort *per se*. Furthermore, research on effort informed by Brehm's theory is also limited to conceptualisation of effort as the mobilisation of energy.

7.9 Minimal and maximum effort

Variable amount of effort are mentioned in the literature. Maximum or maximal effort, is not defined in the literature, but is referred to as exerting one's self to the fullest; to move as hard and as fast as possible (e.g., Hornby et al. 2009); giving full effort or maximum voluntary effort (Velozo 1993). Performance at maximum effort is assumed to demonstrate ability (Nicholls 1978), or performance capabilities (Willis et al. 2011; Velozo 1993). However, gauging that maximum effort has been exerted can be problematic, because individuals can intentionally exert what is termed sub-optimal, sub-maximal effort, insincere effort, lack of effort (Velozo 1993), or poor effort (British Psychological Society 2009). None of these terms are defined, but are used in the context of an individual intentionally putting in a lesser amount of effort than he is capable of; less than full effort exertion, or not fully engaged (DeRight & Carone 2015).

What constitutes maximal or sub-maximal effort is determined by measuring effort in performance against the expected norm. For example, the amount of physical effort exerted can be judged against normative data for the movement; inconsistencies in the quality of physical

performance indicate insincerity of effort (Robinson et al. 1997; Vernon 2000; Chaler 2007). For mental effort, the field of psychology has designed cognitive tests of effort to detect intentional poor effort (British Psychological Society 2009). In the test situation for which the individual has been instructed to try hard, it is considered possible to identify sub-optimal effort in patterns of performance and also in what the individual says (British Psychological Society 2009). When an individual scores below a specific cut-off, this can only indicate intentional minimal effort to distort test results i.e., insincere effort (British Psychological Society 2009).

The British Psychological Society (2009) assert that it is important to note that effort, is a potentially misleading term, implying something that is uni-dimensional, uni-directional, and which can be captured by a test score on a uni-dimensional scale, although this is not the case. Rather, a wide range of information sources is required. Even then, determining whether sub-maximal effort has been put into a test is not an easy undertaking. It is problematic to be certain of how much performance indicates amount of effort, because poor performance may be due to many factors. During cognitive testing of effort, reasons for poor performance include altered mood states, sensory impairment and somatoform disorders, which make identifying intentional distortion of abilities difficult, because poor performance is due to a disordered belief in impaired capacity (Delis & Wetter 2007). In the context of occupational therapy assessment of functional capacity for work, poor performance may be due to fear of injury, anxiety caused by the test situation, fatigue, pain, lack of physical fitness, low mood, and impairment not yet identified, or difficulty understanding test instructions (Baptiste et al. 2005). Rhodewalt and Fairfield's (1991) study on self-handicapping during performance, found that effort may be withdrawn when failure is anticipated due to low self-esteem, resulting in giving up on challenges.

In conclusion to the literature on minimal and maximal effort, there is broad consensus that effort can vary between minimal and maximal effort, what characterises these amounts of effort, and that there are many factors that can influence variability, including voluntary control. This makes determining the amount of effort exerted by an individual a complex undertaking. The literature indicates that although variability is effort is commonly experienced by disciplines, neither minimal nor maximal effort terms are defined resulting in a plethora of differing terms. Research into effort in its varying amounts would contribute to clarifying minimal and maximal effort, as well as potentially provide definitions to aid shared understanding.

Part One of this literature review covered the non-occupational therapy literature on effort. What at first might appear to be a relatively straight forward question, namely, what is effort? has

shown itself to be an extremely complex issue. Effort has been studied from a broad range of perspectives, yet, like fatigue, it has eluded definition. Despite the range of research, there remains a lack of clarity regarding the mechanisms, phenomenology and function of effort. The energetical construct conceptualisation of effort, has focused research on quantitative investigations of a construct that has yet to be clearly conceptualised. Strikingly, there have been no known attempts to study effort through qualitative approaches in order to gain insight into the phenomenology of effort, nor has effort been studied in the process of undertaking daily activity. The latter should be of concern to the occupational therapy profession. Part two of this review explores the occupational therapy profession's conceptualisation of effort, through a meta-synthesis of selected literature. The indications of this, is that occupational therapists offer no clearer understanding of effort, therefore significant gaps in knowledge remain.

Part 2

7.10 Occupational therapy conceptualisations of effort

As a contribution to this literature review, a meta-synthesis of the occupational therapy literature was undertaken in order to synthesise available findings of descriptions of effort and related terms, in order to come to an understanding and conceptualisation of the term effort. Meta synthesis requires the researcher to conduct an in-depth review and assimilate related research findings. By sifting through the findings of primary research articles, emerging themes are constructed that form a larger representation of the phenomenon under study (Chenail et al. 2012).

7.10.1 Methodology of the meta-synthesis

The phenomenon of interest was effort, as described and observed by occupational therapists. The search strategy aimed to find both published and unpublished studies. A three-step search strategy was utilised in this review. An initial limited search of MEDLINE (Ovid) and CINAHL was undertaken followed by analysis of the text words contained in the title and abstract, and of the index terms used to describe the article. A second search using all identified keywords and index terms was then undertaken using the databases of Scopus, Cochrane and PsychInfo. Thirdly, the reference lists of all identified reports and articles were searched for additional studies.
The inclusion criteria were studies published in English between 2000 and 2015 that describe effort or related terms in all types of clients who have received occupational therapy. Due to the

limited number of relevant primary studies available, opinion papers and reports were also considered. Studies focussed on qualitative data including, but not limited to designs such as phenomenology, grounded theory, ethnography and action research.

Initial keywords used were effort AND occupational therapy, motivation AND occupational therapy, occupational engagement, occupational participation, occupational performance, occupational involvement.

Papers selected for retrieval were assessed by two reviewers (myself and one of my supervisors), for methodological validity prior to inclusion in the review using standardised critical appraisal instruments from the Joanna Briggs Institute - Narrative, Opinion and Text Assessment and Review Instrument (JBI-Notari). Any disagreements that arose between the reviewers were resolved through discussion.

Data were extracted from papers or any published opinion pieces, commentaries or reviews using the standardised data extraction tool adapted from JBI-Notari (Appendix M). The data extracted included specific details about the term effort and the initial keywords stated above.
All research findings were pooled using JBI-Notari. Findings were synthesized into themes on the basis of similarity in meaning. Pooling of the findings was presented in narrative form.

7.10.2 Findings of the meta-synthesis

A common concern across the literature is that occupation or activity participation is essential for health and well-being, therefore ability to perform occupations or activities is the common domain of concern in all of the articles. This is explored from client/patient perspectives of activity participation with illness or disability, and from occupational therapy practice and theoretical perspectives of patient activity participation. The literature reviewed is presented in Table 7-1.

Effort is explicitly addressed in five of the seventeen articles: effort features in two occupational therapy theories, and is the focus of three articles on effort assessment. In the remainder of the articles, no themes explicitly to do with effort were evident, therefore themes have emerged as a result of several readings of the articles and identifying inferences of effort. That is, in being sensitised to possible indicators of effort as a result of broader reading to inform the earlier sections of this review, descriptions of participation that may infer effort, have been selected. This resulted in two overarching themes: attitude and strategy for participation, and weighing-up

effort-cost. The remaining articles discuss participation from a theoretical stance, creating two categories for discussion: theoretical frameworks, and effort assessment.

7.10.2.1 Attitude and strategy for participation

Qualitative studies into the lived experience of illness or disability, indicate that an individual's attitude and associated coping strategies when faced with illness or disabilities, influences activity participation.

Price et al. (2012) utilised a single case study of a man who had mastered many challenges and achieved a great deal in the years following his stroke, to explore what determines resilient, continued participation in activity. Key characteristics considered to be highly influential on participation include: a commitment to succeed, use of initiative, self-direction towards goals, internal locus of control, problem-solving and being action orientated. In particular, as characteristic of resilience, he considered adversities as challenges and approached them with a positive attitude. Similar attributes are identified in Lopez's (2011), exploration of resilience theory and its application to occupational therapy with individuals with post traumatic stress disorder. Optimism, motivation and beliefs about ability to meet challenges were identified as features of resilience that impact positively on ability to cope and perform. Conversely, a pessimistic self-appraisal of one's performance has detrimental effects on performance, and can lead to withdrawal and avoidance. Effort is not mentioned in these studies however, the resilience characteristics are associated with motivation and also with effort, particularly commitment and positive attitude.

Levasseur and Couture (2015) undertook a study to be able to identify how specific coping strategies relate to older people's adaptation to the limitations posed by older age conditions and participation. A number of questionnaires were used with a sample of 82 older people to identify which of eight general coping strategies in the Way of Coping Questionnaire (Folkman et al. 1986) they employed, and their relation to participation, health and well-being. Effort did not feature in this study, except to use the term in a general way i.e., adaptive coping strategies are described as "conscious efforts to deal with stressful situations" (p. 45). However, the eight strategies suggest variable amounts of effort. For example, confrontative coping is "aggressive efforts to change the situation" (p. 45) suggests greater effort than escape-avoidance strategies to escape from the problem, which suggests no participation and therefore no effort. The discussion of the findings infer a link between strategies and effort, in that another study found that strategies influence the

activities that individuals will engage in and the energy mobilised to change the situation or adapt to it.

Overall, these articles do not conceptualise effort clearly, but effort is inferred.

7.10.2.2 Weighing-up effort-cost

Three papers suggest that decisions regarding participation are influenced by weighing-up the value of participation and its outcomes against the cost of participation. Two qualitative studies explored the experiences of individuals with conditions that significantly restrict activity participation, for the purpose of identifying factors that influence participation. Gray and Fossey (2003) studied the activity participation of individuals with Chronic Fatigue Syndrome, who experience high fatigue, and decreased physical ability and energy. Effort is not mentioned although it is inferred in descriptions of activities selected according to their energy demands in relation to the energy available to the individual, and the balancing of activity and energy. This suggests that there is weighing up of the need for activity participation against the energetical cost of the effort required.

The up-take of energy is also a consideration for individuals experiencing chronic pain. Aegler and Santink (2009) found that participants had a strong desire to do activity, the most challenging aspect of which was completing activity due to the tiring effects of on-going pain. Effort is inferred in descriptions of trying to do activities, and particularly in keeping on trying to complete activities for which participants had strong intention. In making decisions about whether or not to do and continue an activity, participants weighed-up the benefit of persevering against the cost to them in pain. The strong need for activity participation often outweighed the cost, suggesting that participation is worth the effort. Again, there is no explicit discussion of effort, although it is inferred in the motivation and behaviour of people with activity participation limitations.

Concerned about problems with patient engagement in therapy and negative effect on outcomes, Lequerica et al. (2009) surveyed 199 therapists regarding perceived barriers to patient engagement and strategies they used to facilitate engagement. Although their responses did not specifically refer to motivation theory, the authors identified that the weighing-up of the value and expected outcome of participation against cost was a process commonly facilitated by occupational therapists and physiotherapists in their attempts to foster patient engagement in rehabilitation. The authors suggest that this strategy has similarities with Atkinson's (1964) motivation theory and recommend these are considered in practice. As discussed earlier in this

literature review, value-expectancy theory suggests that these factors influence motivation and effort, however, the link to effort is not explicit in this article.

7.10.2.3 Theoretical frameworks

Several papers explored aspects of activity participation from the occupational therapy perspective that occupational performance is a complex dynamic interaction that involves the person, environment and occupation/activity, and therefore, practice requires theory to understand and attend to this relationship.

Lazzarini (2004) approaches the complexity of occupational performance from a grand theory, philosophical base regarding the centrality of activity participation to human life, before focusing down on performance at a neural level. Activity participation occurs as a result of intentionality through which individuals *stretch forth* to experience their actions as an intermeshing of mind-body-world, and in which they find meaning. From this philosophical perspective, which is central to occupational therapy, therapy outcomes represent an unfurling process of change evolving from the individual's inner potential. This paper provides a discussion of the neural organisation subserving intention, meaning and perception in relation to activity participation. The construct of effort is not mentioned in this paper, but may be inferred from mention of stretching forth, intentionality and potential.

From a less abstract theoretical perspective Tjornstrand et al. (2013) undertook a study to test the psychometric properties of the assessment tool entitled the Profile of Occupational Engagement in People with Severe Mental Illness: Productive Occupations (POES-P) (Bejerholm et al. 2006), which is underpinned by the Person-Environment-Occupation Model (Law et al. 1996) explanation of the person-environment-occupation dynamic. With concern that people with psychiatric disabilities may have reduced activity participation and find usual work opportunities too challenging, Tjornstrand et al. (2013) considered that the POES-P self-report questionnaire of engagement in productive occupations, may enable occupational therapists to understand patients' needs for productive occupation, and evaluate interventions. The POES-P asks questions regarding what the individual does, how long, where, with whom, and provides ratings according to how the occupation was perceived. Questions regarding effort are not evident. The findings suggest that the questionnaire requires further development as it may be measuring a match between abilities and activities, but capture neither the varying demands in the complexity of activities, nor the influence of goal direction. As a reader, this suggests that matching activities to abilities is not presenting challenges to ability, thus effort is not considered.

Similarly, matching ability to demands rather than intentionally seeking to present challenges to ability, is evident in other papers on theoretical frameworks. Polatajko et al. (2000) present the Dynamic Performance Analysis (DPA) as a framework for analysing the performance of an activity/task by observing the quality of the person-environment-activity transaction. Competent performance is conceptualised as occurring when there is a balance between the ability of the individual and the demands of the activity and environment. Performer requisites are knowledge of the activity, and motivation due to its influence on skill acquisitions, task performance, persistence, deployment of skills and knowledge, and affects willingness to continue in the face of increasing challenges. Use of the DPA is dependent upon an individual being motivated to do the activity and having activity knowledge. Case examples are provided to illustrate the use of observation and questioning of the individual in order to determine the cause of problems in performance. Despite the recognition of the importance of willingness to persist, its relationship to effort is not evident.

Henshaw et al. (2011) make a clearer link between willingness and participation in discussion of one of two cases with whom a cognitive approach underpinned by the DPA was used to improve participation in therapy after a stroke. It was noted with increased motivation the patient was more willing to problem solve and more persistent in the face of challenges. Subsequently, it is recommended that attitudes should be considered when implementing therapy.

Two papers link theories originating outside of the occupational therapy profession to activity participation, as borrowed theories that have become well integrated into occupational therapy philosophy and practice. The first is a study by Passmore (2004) who tested the psychometric properties of the Perceived Self-Efficacy scale (Cowen et al. 1991) in order to establish whether it could be used as a predictor of occupational outcomes in children. The relevance of self-efficacy theory (Bandura 1986, 1995) to occupational therapy is that it relates to how much effort an individual is willing to expend, therefore its use could enable prediction of an individual's potential to engage and persist in everyday challenges. Subsequently, this could develop more coherent interventions on informed a priori assumptions in relation to an individual's potential to engage in therapy and perform in challenging activities. The findings conclude that the tool has the potential to enable therapists in more accurately interpreting reasons why some young people avoid or do not sustain engagement in, or master particular activities. There is no discussion of effort beyond its mention in the explanation of self-efficacy theory i.e., that it is to do with challenges and persistence.

The second paper is by Wu et al. (2000) who propose a theoretical framework to address the common problem of poor motivation and lack of active participation in therapy by individuals with mental illness. Driven by a perceived absence of theoretical guidelines to evaluate and positively influence motivational deficits, Wu at al. (2000) draw on self-determination theory (Deci & Ryan 1985, 1991) and learned helplessness theory (Abramson & Seligman 1978; Peterson et al. 1993) to develop practice guidelines to assist clinicians. These consist of strategies to facilitate intrinsic motivation. Effort is not explicitly considered in the guidelines, but may be inferred in one strategy, i.e., that the therapist provides activities with a moderate level of challenge to the individual's ability. Two case examples are provided to illustrate the application of the strategies. Again, effort does not feature, although implied in the cases. For example, the woman in one case, at the end of the therapy stated that she wanted a greater challenge, which may infer readiness for greater effort.

In the other case, a man had not sustained work positions because he found that the jobs demanded too much physical energy and were too burdensome, leading to loss of interest despite work being of importance. The therapist changed the treatment strategy from facilitating ability to undertake work to facilitating engagement in something else of interest, which he managed well. Effort is not mentioned, but it is suggested that the demands of the activity of interest are not the same as that demanded by job performance. This infers that the former required less effort, although the link between demands, motivation and effort is not recognised.

7.10.2.4 Effort assessment

Two articles include the construct of effort in the assessment process as informed by occupational therapy models, and three articles specifically assess effort without a theoretical model.

Kottorp et al. (2013) utilised the Assessment of Motor and Process Skills (AMPS) (Fisher 2010) to evaluate forensic mental health patients' ability to do personal and domestic activities of daily living, together with the Assessment of Awareness and Ability (Tham et al. 1999). The AMPS is an assessment based upon the Model of Human Occupation (Kielhofner 2008) for occupational therapy practice. The AMPS is a performance evaluation that allows therapists to observe and evaluate motor and process skills during performance of two self-selected activities of daily living that pose an appropriate challenge to ability. Motor skills are the actions that people use to move themselves or objects during a task; process skills are how people organise themselves, tools and actions, and reflect how effective they are at overcoming or compensating for problems encountered. The quality of a person’s performance is measured in terms of the effort, efficiency, safety, or independence of the goal-directed actions during a task. Performance is scored on a 4-

point scale as follows: 4 = competent performance without evidence of increased effort, decreased efficiency, or lack of safety; 3 = questionable performance in terms of effectiveness of observed performance; 2 = ineffective performance that slows the activity progress or interferes with completion (e.g., increased effort or difficulty, decreased efficiency, decreased safety); and 1 = markedly deficient performance.

Kottorp et al.'s (2013) study aimed to identify the varying levels of support that forensic patients need in activity performance and what relationship this has to awareness of ability. Limitations in motor ability during performance is thought to reflect increased effort when a person is moving him or herself or task objects, and this was found in a third of the sample, suggesting need for assistance to live in the community. Greater degrees of problems in performance related to poor awareness of performance limitations. However, there is no definition of effort within the AMPS or in this study. Furthermore, the lack of clarification regarding what constitutes an appropriate challenge to ability, limits ability to conceptualise effort. However, the relationship between poor performance, increased effort and poor awareness suggests a link between cognition and effort, although this is not well understood.

The second paper that uses an occupational therapy model, is by Casteleijn and de Vos (2007) who use a case study to illustrate the application of the then named Model of Creative Ability, currently known as the Vona du Toit Model of Creative Ability (de Witt 2005, 2014). Contrary to the assertion made earlier in this review that there are no occupational therapy theories that address facilitation of motivation (Wu et al. 2000), this is the focus of Casteleijn and de Vos' (2007) paper. Concepts linked to motivation are purposeful activity, choice, active involvement, and success and feelings of competence. Each of these has measurable constructs, about which questions can be asked. Regarding effort, information is sought on whether there is maximum effort in performance as an indication of active involvement; and whether the individual puts in maximum effort or shows willingness to engage in activity relates to success and feelings of competence. This is explicitly illustrated in the case study, which links inter-related degrees of ability and motivation to varying degrees of effort, informing the planning and recommendations for rehabilitation. Again, effort is not defined, but is conceptualised as related to ability and motivation.

Three articles specifically focus on the assessment of effort, but none are empirical studies of effort. Occupational therapists who have a role in evaluating individuals' capacity to work, require an individual to exert maximum effort during performance tests in order to gauge his/her

functional capacity, but this is a complex issue due to individuals intentionally exerting less effort than they are capable of (Baptiste et al. 2005). A mixture of terminology is used to describe degrees of effort: maximal, full physical effort, submaximal effort (Strong et al. 2004; Baptiste et al. 2005; Brink 2007), self-limiting (Strong et al. 2004), insincere effort (Strong et al. 2004; Baptiste et al. 2005), and maximum voluntary effort (Baptiste et al. 2005). Effort is conceptualised as a complex construct that can only be evaluated by using multiple sources of data and assessment methods (Strong et al. 2004; Baptiste et al. 2005; Brink 2007). Specifically, effort is considered to be best identified by assessment of consistency of performance across activities with effort behaviours (facial characteristics, pain behaviours), what is expected anthromorphically (e.g., greater force exerted from larger muscle groups) and according to diagnosis. However, effort assessment is a complex undertaking in which the psychological aspects of effort are not adequately understood (Strong et al. 2004), and assessors can often fail to gain insight into the individual's experience of effort (Strong et al. 2004; Baptiste et al. 2005). Given the complexity of determining effort in relation to work, more emphasis needs to be placed on the theoretical basis of effort in order to guide practice (Baptiste et al. 2005).

7.10.3 Discussion of the meta-synthesis

A common thread in all of these articles is the importance of motivation to activity participation, engagement in therapy, attainment of goals and change. Effort is inferred in positive attitude and behaviours indicative of active and sustained activity participation or involvement in therapy. The absence of effort is inferred in the opposite i.e., passivity, pessimism, withdrawal and avoidance. The link between effort, motivation and participation is most clearly inferred in articles that use case examples to describe performance, particularly accounts of the lived experiences of illness or disability and meeting the challenges in activity participation. Subjective accounts emphasise the need for activity participation and suggest weighing-up of whether the cost of activity participation is worth the effort. However, researchers have not made a link to effort explicitly.

The link between motivation, performance and effort is less evident in literature that refers to theoretical frameworks such as the Person-Environment-Occupation Model (Law et al. 1996), the Dynamic Performance Analysis framework (Polatajko et al. 2000), and Wu et al's (2000) framework for facilitating intrinsic motivation. In these articles, there appears to be a focus on matching ability to activity at the cost of recognising the importance of challenge to ability to motivation and performance, although this is picked up on in some of the discussion sections of the articles. This literature suggests there is a lack of consideration of effort in relation to activity participation and motivation.

Occupational therapists use theories that explicitly include effort to inform their assessments i.e., self-efficacy theory (Bandura 1986, 1995), the Model of Human Occupation (Kielhofner 2008) and the Vona du Toit Model of Creative Ability (de Witt 2005, 2014). However, effort is not defined in these theories and the occupational therapy literature does not discuss its meaning, therefore again there can only be reliance on inferences of its relationship to challenge, persistence, ability and motivation. In the field of effort assessment, there is greater understanding of effort as a variable, complex, multi-dimensional construct that requires comprehensive assessment using multiple assessment methods and sources. However, this literature also lacks definitions of effort and calls for a theoretical understanding of effort in order to clarify its characteristics and relation to performance.

Overall therefore, one can conclude that qualitative research into activity participation suggests that effort is an influential factor on activity participation, a limited understanding of which results from research into patient and therapist perspectives. However, in the main conceptualisations of effort may be derived from inferences only, due to the lack of explicit discussion of the effort construct or its mention without definitions or explanations. Subsequently, effort and its relation to activity participation is not well understood in the occupational therapy profession, and there is a need for research into its theoretical construction.

7.10.4 Conclusion to the meta-synthesis

This literature review suggests that there is agreement that effort is crucial to human performance, and has therefore been discussed and studied from neurological, physiological, biological, psychological, behavioural and cognitive perspectives. This indicates, that effort is a multi-dimensional construct. However, despite the extensive interest in effort across differing scientific disciplines, effort is not clearly defined. Rather, as per Kahneman's (1973) capacity model, as the only theory that explains what effort is, effort is predominantly treated as synonymous with energy; its function to mobilise energy. Subsequently, effort research is dominated by quantitative research that investigates effort with psychophysiological investigations, whether using physiological, performance or self-report measures, all of which have limitations. These studies limit understandings of effort to energetical output. Furthermore, they do not provide any clarity regarding the difference between effort, exertion and expenditure, confusion about which hampers understandings of effort.

There is recognition that effort is a subjective experience, mainly explored within the fatigue literature as the sense of effort. This literature suggests that physical and mental effort may be

separate experiences, a feeling state and/or an emotion, but there is no real sense of clarity or consensus on what constitutes fatigue, or the sense of effort. Although effort is subjectively sensed, qualitative research into the subjective experience of effort has not been undertaken. Therefore, insight into the subjective experience of effort is limited to research participant responses to visual analogue scales. However, in the absence of effort definitions, there are differing interpretations of what constitutes effort, evidenced by varying questions and descriptors of effort in visual analogue scales and questionnaires. Therefore, these at best impose conceptualisations of effort onto those that use these measures, and at worst appear to confuse effort with other phenomena. Research on effort has been limited to quantitative investigations that do not adequately capture the multi-dimensional aspects of effort, including the subjective sense of effort. In the absence of subjective descriptions and explanations that originate from those whose performance is researched in regards to effort, conceptualisations of effort are limited to those of researchers and scientists.

From a behavioural perspective, motivation theories indicate determinants and consequences of effort, inferred in behaviour, but do not investigate effort *per se*. Furthermore, motivation research, including that informed by Brehm et al's (1983) Motivation Intensity Theory, does not contribute to understanding what effort is, beyond mobilisation of energy. Although Hockey's model provides a framework for understanding how motivation, effort and fatigue inter-relate and influence the amount of effort in performance, there is yet to be research to offer further insights into the effort construct. Therefore, the mainstream theories related to effort, are limited in terms of contributing to understanding effort beyond energy mobilisation.

Although the occupational therapy profession specialises in understanding motivation for, and the components of activity participation, the meta-synthesis in this review indicates that effort is a construct that is not well considered or understood, and is missing from the literature. Given that effort is crucial to human performance, this signifies a significant gap in occupational therapists' knowledge base.

To conclude, there is a lack of consensus regarding the character, varieties, mechanisms, volition, phenomenology and function of effort. Furthermore, effort lacks clear definitions, including for minimal and maximal effort. This may be due to there being a broad range of differing perspectives on effort, however, although divergent views are understandable and can be healthy in terms of stimulating debate and exploration, ultimately they impede the advancement of science. There is a need to investigate effort, not with quantitative measures in laboratory or test

conditions, nor from a specific scientific perspective. Muscio (1921) was correct in asserting that constructs need to be conceptualised before one is able to adequately operationalise it. There is a need for research that explores effort in the natural setting of the usual course of activity participation, in order to gain insight into the subjective experience and conceptualisations of effort, in its variable amounts. This has the potential to extend existing conceptualisations of effort, and produce a theory that defines effort and explains its multiple dimensions.

Table 7-1 Meta-synthesis articles identified from search for effort AND occupational therapy, motivation AND occupational therapy, occupational engagement, occupational participation, occupational performance, occupational involvement.

Study	Focus	Terms related to effort	Methodology	Conceptualisation of effort	Theme
Price et al. (2012)	Resilient adaptation to stroke	Resilience, commitment, goals, self-efficacy, action-orientated approach	Single case study	Effort not explicit	Attitude & Strategy
Lopez (2011)	Posttraumatic stress disorder and occupational performance: building resilience and fostering occupational adaptation.	Resilience Adaptive capacities	No methodology; description of theoretical concepts	Effort not explicit	Attitude & Strategy
Levasseur & Couture (2015)	Coping strategies associated with participation and quality of life in older adults	Participation	Survey approach Sample: 82 older people	Effort term used in general way. Effort not explicit	Attitude & Strategy
Gray and Fossey (2003)	Illness experience and occupations of people with chronic fatigue syndrome	Occupational performance	Semi-structured interview Sample: 5 adults	Effort not explicit	Weighing-up effort-cost
Aegler and Santink (2009)	How people with pain experience occupational performance	Occupational performance. Engagement	Semi-structured interviews. .	Effort not explicit	Weighing-up effort-cost
Lequerica et al. (2009)	Occupational therapist and physiotherapist perspectives of patient engagement in therapy	Engagement Therapeutic engagement	Survey approach Sample: 199 occupational therapists and physiotherapists.	Effort not explicit	Weighing-up effort-cost
Lazzarini (2004)	Neuro-occupation: The nonlinear dynamics of intention, meaning and perception	Active participation, intention	No methodology; description of theoretical concepts	Effort not explicit	Theoretical frameworks
Tjornstrand et al. (2013)	Psychometric testing of a self-report measure of engagement in productive occupations.	Occupational engagement	Psychometric testing of Profile of Occupational Engagement in people with severe mental illness: productive occupations (POES-P)	Effort not explicit	Theoretical frameworks
Polatajko et al. (2000)	Dynamic performance analysis: A framework for understanding occupational performance	Motivation, optimal performance	Case illustration	Effort not explicit	Theoretical frameworks

Henshaw et al. (2011)	Cognitive approach to improving participation after stroke	Participation Task performance	Two case studies	Effort not explicit	Theoretical frameworks
Passmore (2004)	A Measure of Perceptions of Generalized Self-Efficacy Adapted for Adolescents	Activity participation	Psychometric testing of Perceived Self-Efficacy scale (Cowen et al. 1991)	Effort relates to activity choice, persistence, sustained performance in relation to challenges	Theoretical frameworks
Wu et al. (2000)	Facilitating intrinsic motivation in clients with mental illness	Motivation Engagement Participation	Case illustration	Effort not explicit	Theoretical frameworks
Kottorp et al (2013)	Kottorp et al (2013) Evaluation of activities of daily living ability and awareness among clients on forensic mental health	Ability to perform, performance	Observation and Assessment of Motor and Process Skills and the Assessment of Awareness and Ability. Sample: 35 forensic patients	Effort relates to quality of motor and process skills in performance	Effort assessment
Casteleijn and de Vos (2007)	Introduction to the Model of Creative Ability and case to illustrate its use in vocational rehabilitation.	Occupational choices Intrinsic motivation Volition Engaging in occupation Creative process Maximal effort	Case illustration.	Measurable construct. Variable to maximal effort. Related to motivation and ability.	Effort assessment
Baptiste et al. (2005)	Work capacity evaluation	Performance	No methodology; textbook chapter discussion	Multiple terms used to describe variations in effort. Complex, multi-dimensional construct.	Effort assessment
Strong et al. (2004)	Functional assessment of injured workers: A profile of assessor practices	Ability to function, functional performance, work capacity	Survey approach, site visits, semi-structured interviews with 76 assessors, reviewed reports.	Multiple terms used to describe variations in effort. Complex, multi-dimensional construct.	Effort assessment
Brink (2007)	Applying the use of activity in the assessment of malingering	Malingering, performance, functional abilities	Case illustration	Multiple terms used to describe variations in effort. Complex, multi-dimensional construct.	Effort assessment

Chapter Eight

Discussion

8.1 Introduction

The purpose of this study was to discover effort and maximum effort and their relation to the conditions for, process, and results of activity participation.
The conceptualisation of effort emerged in participants' accounts of subjective experiences, perceptions and observations of effort in activity participation, in varying natural contexts of participants' lives. This was supported by my observations of patient participants' activity participation.

This chapter discusses the study findings in relation to the literature, leading to a conclusion. It begins with addressing the question: what is effort? This is done by setting out 1) a definition of effort, its conceptualisation, awareness as a requisite to effort of effort, and the effort-fatigue relationship followed by 2) the function of effort; 3) the quality and quantity dimensions of effort, its observable referents and variability in amounts; 4) the relationship between demands and effort; zones of effort; 5) the decision-making process.

8.2 What is effort?

Emerging from the data, effort is defined as a subjective feeling of either exertion of one's self in activity participation, or a negative feeling of being drained by lack of satisfying activity participation. The definition has two aspects, each dealt with in turn.

8.2.1 Effort: exertion of the self

With respect to effort as exertion in activity participation, effort was not described as occurring in all activity participation, but in doing activity that was demanding on motivation, mental and/or physical resources. Equally, it could be the environment rather than the activity itself that presented demands. Essentially, in relation to demands, exerted effort was the expression of motivation in action. If there was motivation to meet the challenge of the activity, then motivation was manifested in a conscious, intentional putting forth, or putting-in of the self into

activity participation. What is put forth was described as one's power, energy, strength, resources, yourself (what you've got), enthusiasm, courage and thinking. In putting one's self into activity participation, exertion of effort was actively applying one's resources i.e., motivation and mental and/or physical functions, skills and/or abilities, in active engagement with activity. When attempting to do something other or more than they could already do, exerted effort was also described as trying, subjectively experienced as a stretch, strain or a pushing of one's self in order to attain a goal.

The experience of the exertion of effort was spoken of by patients and members of the public a positive way, including the sense of strain or being stretched, because putting effort into something had been their choice as individuals motivated to do activity. Even when activity participation involved unpleasant experiences, such as pain for the patients with burns, when activity was important i.e., motivating, exertion of effort was spoken of positively. In such circumstances the sense of effort indicated that they were working towards their goals. Participants strove for tangible and intangible rewards, the attainment or progress towards which, constituted the consequences or outcomes of effort. Participants were motivated to satisfy their wants, goals and often fundamental needs in the course of living. This required effort as the application of the whole self as a total resource. This was expressed in terms of putting-in all that one is into activity participation; meeting the activity with one's self.

These findings support other findings and theoretical assumptions in the effort literature, that effort is under conscious control, occurs in relation to demands, and is a reflection of motivation (Hockey 1997, 2013; Brehm et al. 1983). Contrasting to existing literature, is the finding that in this relatively short explanation of effort, are important differences to existing conceptualisations of effort and resources. These are discussed separately, but are inter-related.

First, effort and resource were found to be discrete concepts: resource is the self, and effort is the application of the self. This clearly differentiates these concepts, which contrasts to the interchangeable use of these terms in the literature. Also, this conceptualisation of effort is quite different to the prevailing conceptualisation of effort as mobilisation of energy or resources. In the current study, it was clear that resources are mobilised to do activity. As Hockey (2013) suggests, at the most basic level of human performance, it is obvious that the conversion of energy is the basis of all activity and behaviour. However, resource or energy mobilisation did not automatically equate to effort, because activity could be done without effort. Doing activity, but without the sense of effort was energy and resource expenditure, whereas effort was exertion,

suggesting that something other than resource mobilisation. There is a lack of clarity in other effort research regarding effort expenditure and exertion differences. In the current study, the finding that effort is a conscious exertion of the self, perhaps aligns with notions of mental effort, whilst physical activity equates more closely to energy expenditure.

Associated with the above, is the finding that resource was not conceptualised as being limited to mental operations or energy, as evident in other effort research and theories. Rather, resource encompassed the whole self. An obvious reason for the difference in conceptualisations of resource, is that most participants (patients and public) were not approaching the subject of effort as a scientific discipline focussed by a particular perspective, but phenomenologically i.e., the experience of a human being. It is widely recognised that the use of terms by scientific disciplines, often differs to use in everyday language (Hagedorn 1992; Creek 2010). Concerned with how concepts develop and gain authority in a discipline, Toulmin (1972) suggested that concepts become the collective possession of a community of 'concept users'; concepts being part of a knowledge base needed to explain certain phenomena (Rodgers 2005). What may be perceived as a challenge to established conceptualisations of resource, social psychologists Blascovich et al. (2001), brought a different perspective to the notion of resource, suggesting a theoretical model in which resource consists of skills, knowledge, abilities, dispositional factors, and external support. Blascovich et al. (2003) argued that a different perspective to what they deemed to be a simple physiological approach to understanding responses to demands, (e.g., the energisation model), is valid, and warned that strict adherence to traditional definitions restricts the advancement of knowledge. In the same vein, the subjective view of resources found by the current study, offers a new perspective for researchers, theorists and disciplines to consider.

8.2.2 Effort: negative feeling

Effort was not solely a sense of exertion, but also was experienced when activity participation was not satisfying, or participants were deprived of activity, and therefore the need for activity participation was not met. Participants talked about there being effort in not being able to do activity when they really wanted to do something, and also in doing activity that was tedious, frustrating, lacking challenge, lacking in personal value, or boring. The sense of effort in these situations was not the same as exertion or putting one's self into activity participation, but more closely associated with a negative feeling of being drained psychologically, and was not pleasantly experienced. In these effortful circumstances, the function of effort was not to mobilise energy, but perhaps relates more closely to mechanisms of coping and/or a feeling of fatigue.

The association between effort and negative feeling resonates with notions in the literature that effort is an emotion. Situated within fatigue rather than effort literature, a way of thinking about fatigue (sense of effort), is as a generalised form of depression (Hockey 2013). Low mood states are thought to function as a mechanism for dissolving commitment and encouraging disengagement from unrewarding goals (Carver & Scheir 1990). In this respect, van der Linden's (2011) idea that fatigue is a *stop-emotion*, may be relevant to the finding that effort can also be a negative feeling state.

On the other hand, it is unclear from the findings whether effort was a negative feeling state itself, or whether managing dissatisfying experiences and the negative feelings that they evoked, was effortful. Mental health patients in the current study, who lacked opportunity to do activity or were forced into being inactive, experienced boredom and/or frustration at time passing them by. The routines, structures and lack of resources within in-patient mental health services, have been found to deprive patients of activity participation with negative impact (Whiteford 1997; Farnworth 1988), including a sense of boredom due to unproductive passing of time and lack of challenge (Farnworth et al. 2004). The human need for activity participation and challenge (Csikszentmihalyi 1988, 1990; du Toit 1973, 1974a), is reflected in the finding that patients' need for challenges in order to use abilities, motivated them to create challenges by self initiating activities to relieve boredom (Farnworth et al. 2004).
Martin (2007) found that boredom can be experienced as a low level of arousal, central to explanation of which, is attention. As indicated in the literature review, arousal and attention are constructs integrated with the effort construct, offering a possible explanation for the experience of effort in participants that were under challenged or not engaged in satisfying activity.

8.2.3 Awareness

A significant influence on effort was *awareness of* something, and also the ability to evaluate something in relation to the self - awareness in relation to. Awareness was associated to relating, in that in order to relate, act and put effort into something, there must be awareness of something. Essentially, awareness was a required condition for there to be effort. Patients with profound learning disabilities were described by therapists as not putting in effort, because they lacked awareness of the surrounding environment, and therefore did not act in relation to it. Varying degrees of awareness, apparently influencing effort, was also observed in the patients without obvious cognitive impairments. Lack of awareness in relation to, was observed in patients who had not come to terms with their physical or mental health conditions and their altered selves. Subsequently, they could not act in relation to performance problems via therapy. In this

respect, awareness or insight as a clinical phenomenon, needs to be distinguished from the concept of awareness (Markova & Berrios 2006). The former is the clinical manifestation of what can only be an aspect of the wider concept of awareness (Markova & Berrios 2006). Lack of awareness in relation to, was specific to certain groups of patients rather than patterning out across the sample. The obvious reason for this, is that only a percentage of the sample had clinical conditions that would give rise the discovery of the phenomenon. However, few would argue that people without physical or mental conditions are not also susceptible to lacking awareness of things around them, or lack insight, affecting effort. Therefore, awareness has general relevance.

The discovery of the relationship of awareness to effort, contributed to identifying what comprises the conditions for effort, as per an objective of this study. The relationship between awareness and effort is logically linked to attention and effort. It is logical that if there is no awareness of something, there is no attention to it, therefore no effort. Several researchers and theorists maintain that attention and effort are inter-related (Kahneman 1973; Hockey 1986, 1997; Shiffrin & Schneider 1977; Martinsen et al. 2007). In Activity Theory (Leont'ev 1978), which explains human development as a dialectical process between person and society, a key tenet is that the individual must be the acting subject of his development in interaction with the environment. Applying this theory to clinical practice means that developing active motives for engagement in therapy relies on the individual recognising what he has lost and what his problems are, in order to actively take action in, and with, treatment (Fortmeier & Thanning 2002). However, in the face of acute illness, individuals can be so despairing and lacking in insight that they are unable to act of their own accord (Fortmeier & Thanning 2002). The relationship between lack of awareness of impairments, lack of emotional adjustment and poor participation in therapy has been found in many clinical populations (Korte et al. 2007; Prigatano 1999; Kortte & Wegener 2004). This suggests support for the current study's finding that awareness is related to effort.

8.2.4 Effort-fatigue relationship

In addition to, and different from the sense of effort as straining or stretching one's self whilst trying to do something, participants also had the sense of being drained as a result of effort. This was also described as feeling depleted or fatigued. Therapists whose role was to assess how much capacity individuals had to work, viewed the signs of fatigue as signs that there had been effort, and that activity participation was becoming increasingly effortful. It is firmly established in the fatigue literature that effort is the precursor to fatigue, the latter being a sign that there has been effort (Hockey 2013; van der Linden 2011).

Participants had a sense of the amount of resources they had; they were able to gauge how much had been taken up by activity participation, and how much they had left. The participants who undertook physically demanding activities were particularly able to predict how much effort would be needed to do specific activities, therefore in relation to activity participation demands, they could, if they wanted to, manage their use of resources. This finding fits with the theoretical assumptions stated in Motivation Intensity theory (Brehm et al. 1983; Brehm & Self 1989) and Hockey's (2013) Motivational control model of executive control. That is, that effort can be monitored during performance, and there are reserve amounts of accessible effort (Brehm et al. 1983; Brehm & Self 1989; Hockey 2013). This finding also points to the relevance of awareness in relation to the self, which would have to be present for effort monitoring to be possible.

8.2.5 The function of effort: relatedness

The study included a diverse range of people doing and/or talking about diverse activity participation within their daily lives, to do with leisure interests, roles and work. In activity participation, effort was exerted in order to satisfy wants, goals and needs. These included: succeeding or achieving a goal; bringing about change in, or furthering themselves, learning, growing or developing abilities; being connected socially; gaining satisfaction and enjoyment; gaining financial rewards; upholding personal standards; gaining approval, and regaining roles, relationships and identity. A large number of participants were patients, therefore there was a lot of emphasis on effort for bringing about positive change in themselves, but this was also a strong motivation in members of the public. The exception was the retired ladies who sought and put effort more into activities that satisfied the need for activity that was interesting, enjoyable and satisfied the need for social contact. The church ministers focussed on the effort involved in their work, influenced by my exploration of spiritual effort at the time.

For many mental health patients, the function of effort was also to satisfy the need to experience something of themselves: to know and experience one's self; show 'who I am' and that 'I can' do things through successful activity participation. The Theory of Occupational Spin-off (Rebeiro & Cook 1999), conceptualises the experience of activity participation and hypothesises that it contributes to the maintenance of the self and well-being over time. The authors' qualitative study, leading to the theory found that activity participation can facilitate moving beyond mental illness, particularly when competency is confirmed through accomplishment in activity participation. This can confirm self-identity and transform identity. Other studies have also found that a highly valued outcome of activity participation for individuals with mental health problems,

is realising a sense of self, building self-identity (Mee et al. 2004), and reconnecting with a previous or wanted identity (Blank et al. 2015).

Whatever the reasons, activity participation was an essential aspect of the experience of living. The function of effort was to connect the individual with himself and the world. Connection with self and world occurred in activity participation. Connection with one's self also occurred when there was a lack of satisfying activity participation, in terms of awareness of unmet needs, thoughts and feelings evoked, and the resulting sense of effort. Therefore, effort was to do with the experience of life rather than merely the functional doing of activities or tasks. Subsequently, the function of effort is more than energisation of performance alone, but has philosophical significance.

Effort is situated within, or arises from the self, and is in the relation between the self and the world. With respect to the latter, the philosopher John Dewey stated that the individual is enmeshed in the world, and that this is significant to understanding the basis of intelligent action and human experience (Cutchin 2008). That is, that the origins of action arise not from within, but from "the constantly emerging relations that bind person and world" (Cutchin 2008, p. 1562). This is not to say that action does not ultimately arise from the individual, but that this is in response to, and inseparable from, the connectedness between person and world. With regards to a focus on effort and the self, the finding that effort is the expression of motivation, is subjectively experienced and a fundamental aspect of living, resonates with the ideas of the existentialist philosopher, Maine de Biran (1805), who proposed that effort and will are inter-related within one's consciousness, and that the feeling of effort is the fundamental criterion of the self.

These philosophical views fit well with the finding that the function of effort was essentially to connect each participant to what he needed or wanted, and also connected him to himself. During the study, the term relating emerged to describe this phenomenon. A relationship between connectedness and relatedness was found by Hagerty et al. (1992), prompted by clinical observations that mental health patients demonstrated various states of connectedness and disconnectedness. This was also what I sensed in this study through observations of activity participation. The authors reviewed literature on connectedness and disconnectedness, examined clinical cases, and conducted focus groups on perceptions of connectedness and disconnectedness with the self, others, society and environments. Using a strategy for concept development, connectedness and disconnectedness became subsumed under the theoretical construct of relatedness. Subsequently, in the Theory of Human Relatedness (Hagerty et al. 1993), relatedness

is described as the need to be connected "to others, social institutions, environments, and self" (p. 173). In recognition that relatedness can be a comfortable experience, but also uncomfortable and anxiety-producing, relatedness is defined as "an individual's level of involvement with persons, objects, groups or natural environments and the concurrent level of comfort or discomfort associated with that involvement" (p. 292). This resonates with the finding that effort can be a negative feeling, and also that anxiety can provoked by challenging and effortful activity participation, whilst effortless activity participation can be comfortable. Although the idea of relatedness emerged initially from observations of patients in the current study, its relevance emerged in all of the data. Subsequently, the function of effort has emerged as relating the individual to the self and the world.

This is a markedly different conceptualisation of the function of effort to that in the literature i.e., mobilisation of energy or resources. An apparent reason for this difference is that there are important differences between the participants' view of activity participation and that of researchers, theorists and scientists. Much of the effort literature is concerned with the effort of the human operator, human system or organism. These terms lack a sense of humanness, but suggest a mechanistic view of human beings, as per the influence of interest in machines on the concept of resources in the mid 20th century (Sanders 1997; Hockey 2013). Furthermore, Hockey (2013) asserts that the term human performance has come to have a restricted range of meanings within experimental psychology and human factors. Human performance is most commonly understood to refer either to a) the effectiveness of certain skills in order to meet cognitive goals, or b) underlying mental processes and mechanisms related to such behaviour (Hockey 2013). This is a narrow approach to performance that is concerned with skills, mechanisms and processes, compared with participants who approached performance as the acts that are a fundamental part of living and existence. Husserl (1970) criticised the mechanistic view of the body as a machine producing perception and action. Husserl (1970) maintained that fundamental to understanding how humans perform, is how the self and the world are experienced, as this is the basis for action and finding meaning in our actions. This is a phenomenological approach to knowledge generation. Building on this idea, Merleau-Ponty (1945) and Leder (1990) emphasise how experience and performance is given and shaped by the body. One cannot, therefore, conceive of action as separate from experience since all action implies a way of apprehending self and the world (Merleau-Ponty 1945; Leder 1990). This phenomenology perspective underpins the differences in participants' perspectives on the function of effort, to those of researchers. That is, unlike approaches that examine bodily mechanisms and processes to describe and explain

performance from an objective perspective, phenomenology focuses on how subjective experience shapes action.

8.3 Quantity and quality dimension of effort, and its observable referents

An unexpected finding was that effort has quantity and quality dimensions. Quantity of effort is defined in the current study as *the amount of resources exerted in relation to the amount available to use; the quality of effort is how well or intensely an individual applies himself, in relation to what he is capable of doing. The quantity and quality of effort reflects the degree of motivation and ability that an individual has i.e., quantity and quality of motivation and abilit*y. *Specifically, it is the degree of motivation rather than ability that determines the amount of effort.*

Notions of quantity and quality of performance are disparate and fragmented in the literature. The quality of the transaction between an individual and activity/environment is an aspect of performance analysis by occupational therapists (Fisher 1998), although as the meta-synthesis of literature in this thesis indicates, its relationship to effort is not well understood. However, within Self-determination theory (Deci & Ryan 1985, 1991, 2000), intrinsic and extrinsic motivation are described as types of quality of motivation that explicitly relate to behaviour quality (Ryan & Deci 2000), and quality of engagement and performance (Ryan & Deci 2000a). The discovery of both quantity and quantity dimensions to effort is a new contribution to understanding the relationship between motivation and effort.

The quantity and quality of effort was perceived to be observable in the quality of performance. Because effort is a subjective experience, observable referents may be best considered to be indicators of perceived effort. The observable inferences of a construct are its properties, and for effort, there were many observable referents perceived to be indicators of effort. Doing activity required the individual to think about how to do it, and its purpose. This was observable in individuals actively paying attention to what they were doing, concentrating, problem solving and decision-making. Meeting those requirements was evidenced in participants' doing of the activity with due care and attention, or diligence. In employing thinking abilities, there was the potential to overcome arising challenges, observable not only in problem solving, but in persistence, perseverance or endurance. However, these behaviours, in and of themselves, were not taken on their own as indications of effort. Whether these were signs of effort was determined in relation to two main information sources: 1) knowledge of the individual's capabilities in relation to the requirements of the activity and the environment at the time i.e., whether the activity participation was demanding; and 2) verbal and non-verbal expressions or signs of effort.

Regarding the former, this was knowledge that occupational therapists gained in the course of patient assessment and therapy provision, or members of the public developed from close relationships with others. Regarding signs of perceived effort, effort was sometimes stated verbally including direct statements that the activity was hard, required effort or trying hard; sighing was also a sign of effort. Being able to divide attention so that one could converse a lot with others, was a sign that the activity participation was not very effortful. When anxiety or negative feelings were expressed about doing something, but there was a decision to do it anyway, this was also a sign of effort.

The nonverbal signs of perceived effort were: the degree to which the individual was animated, alert or energetic; qualities of facial expression, posture and body language. Lack of eye contact, appearing *half here, half somewhere else*, just doing, not thinking, lack of care and attention, slumped body posture and not fully doing what the activity required despite having the ability to do it, were commonly stated signs of lack of effort. Collectively, verbal and nonverbal behaviours communicated the degree to which individuals were actively engaged with the activity. Active engagement was the main overall indicator that there was effort. Active engagement was also reflected in the degree of interest in the activity, observable as willingness, readiness, eagerness or enthusiasm to engage. This range of signs of effort were described mainly by occupational therapists, who observed and sought effort from patients, but members of the general public also described some of these.

There are several interesting issues arising from these findings. That facial expression can reflect effort, is not an expected finding, but it is an under researched characteristic of effort. Facial expression was identified as an effort behaviour in a study of occupational therapists' strategies for assessing effort, although this is not expanded upon by Strong et al. (2004a). Rejeski and Lowe (1980) identified that effort exerted by athletes can by judged from nonverbal behaviours, such as grimacing and squinting. These are not behaviours in the current study's findings, however intensive physical activity was not observed nor described in terms of observable referents. It can be anticipated that some nonverbal behaviours are more likely to occur in the doing of some activities and not others, due to what they require. Therefore, there can be no one set of effort behaviours as such. However, nonverbal signs of effort such as facial expression, also known as the face of effort, has received scant scientific attention (de Morree & Marcora 2010).
It may be that signs of lack of effort, observable in the nonverbal behaviours of lack of active engagement, may be useful to research into what is effortful and effortless performance. Flow theory raises an interesting issue in this respect. A state of flow occurs through active, intense or

engrossing engagement in activity that is satisfying and requires a high degree of ability (Csikszentmihalyi 1975). However, despite engaging full attention, it is not effortful engagement, but effortless (Csikszentmihalyi & Rathunde 1992). In the current study, some sports people reported that they could do highly engaging activity without awareness of effort, which sounds like a flow experience. Flow states particularly occur in competitive sports people (Jackson & Roberts 1992; Jackson 1995, 1996). Active engagement without effort supports the current study's finding that activity requiring a lot of attention is not necessarily effortful, as Kahneman (1973) maintains, but at the same time contradicts the finding that active engagement is a sign of effort. It is important to note that the term effortless is neither defined nor explained in the flow literature, therefore there is the possibility that it holds a different meaning to that in the current study. Nevertheless, the issue of contradiction requires further investigation

8.3.1 Variability of effort in amount

The variability of effort was evident in participants' mention and description of effort in varying amounts e.g., no effort, little effort, a lot of effort. Maximum effort was a construct introduced to participants in interviews and specifically explored, as per an aim of the current study.
Effort varied along a continuum from minimal to maximum (maximal) effort, reflecting and corresponding to varying strength of motivation. Strength of motivation and effort could be identified by combining observations of signs of effort with knowledge of the individual's abilities in relation to the activity participation demands.

When asked about maximum effort, this was a construct recognised and described by all participants. Emerging from the data, maximum or maximal effort is defined in the current study as: *the motivated exertion of one's mental and/or physical functions, abilities and/or skills to the fullest that one is capable of, in the doing of a specific activity.* Reflecting strong motivation, the function of maximum effort was to do one's best towards achieving or attaining something substantial e.g., mastering a big challenge, or gaining something one really wants - strongly motivated for. Maximum effort was described as intense engagement that could only be sustained for a relatively short amount of time, due to its fatiguing effects. However, what was an individual's absolute maximum effort was difficult to approximate, due to uncertainty about where the boundary of one's capabilities is. In the activities that I observed, I could not distinguish maximum effort from effortful activity participation, but the occupational therapists could, based on their greater knowledge of the individual. The conceptualisation of maximum effort in the current study, is similar to that in the literature, except that it does not limit maximum effort to peak cognitive, energetical or biomechanical output against set norms. Rather, what constituted

maximum effort was determined by the unique person-activity-environment dynamic of each individual, and involved the whole person.

Again, emerging from the data, minimal or minimum effort is defined in the current study as: *the consciously decided upon, minimal use of one's mental and/or physical functions, abilities and/or skills, compared to that which could be used; consciously doing less than one is capable of in relation to a specific activity.*

Minimal effort reflected low or poor motivation. Minimal effort was observed in many patients, but was only described by occupational therapists and members of the public. An explanation for this, is that I did not enquire about minimal effort in interviews with patients, because the focus at the time was on discovering the difference between no effort, and effort. Also, given that the research on patient effort was situated in a hospital setting, and what may be considered as undesirable qualities of minimal effort in this context, it is unlikely that patients would volunteer that they had put minimal effort into activity participation. Conversely, occupational therapists were aware of the likelihood of minimal effort from patients, and were concerned to spot it, due to its link to poor therapy outcomes. Minimal effort was observable in the quantity and quality of effort i.e., in the signs of lack of effort, as described earlier. Minimal effort as defined herein, is also described in the literature but in different terms e.g., insincere effort or sub-maximal effort. The phenomenon of minimal effort is recognised across many professional fields, including medicine (Vernon 2000), occupational therapy (Strong et al. 2004), psychology (e.g., De Right & Carone 2013; British Psychological Society 2009).

As an observer, I found minimal effort was more easily observable than maximum effort, although again, this was better judged by therapists due to their knowledge of the individual. The therapists spoke confidently of being able to judge patients' amounts of effort. This is interesting given that effort assessors are vulnerable to misinterpreting performance (Baptiste et al. 2005; British Psychological Society). Subsequently, information is needed from a number of sources in order to make an adequate judgment of an individual's effort (Strong et al. 2004; Baptiste et al. 2005; Brink 2007; British Psychological Society). It is noteworthy that therapists did have depth and breadth of information about patients' abilities and performance, which may have enabled them to be confident in their evaluations. Occupational therapists are skilled at activity analysis for identifying activity requirements, and also analysis of mental and physical components of performance, central to which is motivation as a core construct in the profession (Creek 2003). This combination means that they are well placed for evaluating effort. Interestingly, however, therapists did not ask patients directly about their effort, but talked more in terms of motivation.

Failure to gain insight into the subjective experience of effort makes assessors vulnerable to inaccurate effort evaluations (British Psychological Society 2009).

8.4 Effort, demands and effort zones

Effort occurred in relation to activity participation that was demanding, meaning that there was a mismatch between the inherent requirements of the activity and/or environment, and the resources of the individual. This mismatch meant that the activity participation demanded something from the individual that was not readily available in terms of function, knowledge, skills or abilities, or motivation. Activity participation that demanded of the individual became a challenge, in relation to which, effort in varying amounts could be put into the activity, or there was a decision not to do it.

The meanings of demand and challenge in the above are specific to the current study, and are stated in relation to the conceptualisation of effort herein. This is an important point to make, because although other studies on effort agree that demanding activity requires effort (Kahneman 1973; DeRivecourt et al. 2008; Guadagnoli & Lee 2004; Wulf & Shea 2002; Navon 1984), what constitutes a demand in the literature, varies in relation to the conceptualisation of effort as mobilised energy. For example, Kahneman (1973) views demands as situated inherently within the activity, drawing on attention and effort. What Kahneman views as demands, is conceptualised as activity requirements in the current study. This differentiation is part of understanding the difference between energy expenditure and effort. For example, participants who were sports people could swim or run for long distances and to full physical capacity, but not find it effortful. However, they felt fatigued afterwards - not due to exertion of effort, but due to the energy expended in meeting the activity requirements. This is similar to the state of flow, when an individual is fully involved in an activity that requires a great deal of their resources, but it does not feel an effort (Csikszentmihalyi 1990).

A demand was not inherent in the activity, but defined by the individual. That is, a demand was the gap or mismatch between the requirements and the individual's resources. Participants felt effort in exerting themselves to meet the challenge posed by the activity i.e., in bridging the gap or mismatch between what the activity participation required, and their readily available knowledge, skills, abilities and/or motivation. Equally, participants experienced effort in the absence of something to do, or when faced with activity participation that was under stimulating, tedious or boring. In this circumstance, the mismatch was that they had abilities that they wanted to use, but these were not required, and/or motivation was not satisfied. As a result, demands were made on

the individual psychologically in managing the dissatisfying or frustrating experience. That the absence of activity can be a demand, is not found in other studies of effort. However, studies on flow have found that when activity requires a low degree of skill and presents a low degree of challenge, a feeling of boredom can result (Csikszentmihalyi 's 1990).

The degree of demand on participants, directly related to effort. When demands were too high in relation to the individual's resources, this could result in stopping the activity, or avoidance of it because trying was perceived as insufficient to meet the demands. This is congruent with other research (Silvia & Duval 2001; Duval et al. 1992; Wright 1996; Wright & Kirby 2001). When activity participation was perceived as too difficult, this could evoke anxiety as illustrated by Sarah (older person, cohort 3), who felt that she did not have the ability to undertake a holiday abroad (section 6.5.2). Rebeiro and Polgar's (1999) research into engagement in activity had similar findings. This provides support for Csikszentmihalyi 's (1988) finding that when an individual perceives that activity participation requires abilities that are greater than he possesses, anxiety results and there is no participation. For there to be active and satisfying participation, there needs to be the just right challenge i.e., activity that is neither overly nor under demanding (Csikszentmihalyi 1988). This fit is also recognised in occupational therapy as being necessary for initial and sustained engagement in occupation (Yerxa 1990).

Although whether or not activity participation was demanding was individually defined, participants agreed that new or unfamiliar activities were particularly demanding of effort. Unfamiliar activities have been found to require effort due to the amount of concentration, information processing and attention needed to do them (Shiffrin & Schneider 1977; Kahneman 1973). In contrast, participants found activities that were familiar and were easy because they could already do them, did not require effort because they could be done habitually, or without much thought. This finding is congruent with other propositions that known activities can eventually become automatic behaviour, or routine processes that do not require one to pay attention (Shiffrin & Schneider 1977; Kihlstrom & Tobias 1991); also described by Bargh (1994) as activity done without awareness and with little, or no effort. Kahneman (1973) also maintained that it may be impossible for people to work hard in relatively easy tasks (Kahneman 1973; Kahneman et al. 1968). Two members of the public also identified that unexpected problems, such as adverse changes in the weather during outdoor pursuits, was also demanding of effort. Unanticipated problems and uncontrollable stimuli are described in the literature as stressors, known to make performance effortful (Hockey 2013; Hockey 1986; Lepine et al. 2005; Cavanaugh et al. 2000).

What constituted a demand that made activity participation effortful, was individually defined depending upon the person-activity-environment dynamic, which could change quickly, making doing something more or less challenging and effortful. Thus, effort was a state of flux. In quantitative studies on effort, this has been understood in terms of the dynamic between an individual's energy levels, the environment, task difficulty and effort, measured physiologically. However, in conceptualising effort as mobilisation of energy, understanding of demands on effort is limited to demands on energetic output, without considering that what makes something demanding and effortful is also determined by the individual's motivation for the task. Therefore, researching effort by measuring energetic output during a highly energetic activity, may measure energetic output, but doing the activity may not have been effortful to the individual.

8.5 Decision-making process: weighing-up

An objective of this study was to discover the antecedent to effort. This was approached by exploring when there is no effort, and what it takes to move from that position into effortful activity participation. What emerged was a decision-making process as a precursor to effort. The decision-making process was the processing of strength motivation in order to arrive at a decision to exert effort in varying strengths or amounts. It was not possible to determine precisely whether some, but not other sub-processes occurred, because thinking is not directly observable. The decision-making process involved weighing-up numerous aspects of the person-activity-environment relationship in terms of activity participation. Participants considered how they felt about the activity in terms of how much they were interested in it, and how much they valued it; how much effort would be needed to do the activity (gauging effort); and beliefs regarding how feasible it was that they would be able to do the activity in a way or to the degree that they wanted, or were required to do it (prediction of activity participation). These aspects were weighed up in terms of whether doing the activity would be worth the effort.

This process is theorised in terms of expectancy-value beliefs in modern expectancy-value theories (e.g., Eccles 1987; Eccles et al. 1983; Wigfield & Eccles 1992, 2001; Feather 1988). As the most widely cited theory, the Expectancy-value theory (Eccles at al., 1983), describes the aforementioned considerations as beliefs; those relevant to what is termed prediction in the current study are referred to as expectancy beliefs in the theory. The Expectancy-value theory has been supported by research across diverse samples, contexts and activities[3]. Expectancy-value

[3] see Weiss et al., (2012) and Grant & Shin (2012) for reviews of research

beliefs have been found to affect effort, inferred by persistence (e.g., Choi et al. 2010; Magidson et al. 2014).

In the current study, effort was influenced by the type of beliefs and task values that are described in the Expectancy-value theory: competency beliefs and attainment, intrinsic, utility and cost values. Belief in adequate competency for activity participation could positively influence motivation, observed in active engagement and signs of effort. This finding is also congruent with Bandura's (1997) studies on the influence of self-efficacy on persistence (Bandura & Schunk 1981; Lent et al. 1986; Pajares 1996). A strong sense of self-efficacy was not sufficient for succeeding in activity participation, however, but ability was also needed. This was reported by occupational therapists who noticed when patients had used up the resources required by the activity, and had therefore stopped participating because they had run out of effort. This is congruent with assertions that self-efficacy does not have a linear relationship with effort, and that performance relies on both requisite abilities and adequate strength of motivation to succeed (Bandura 1997; Weinberg & Gould 1995; Schunk & Usher 2012).

A lack of belief or confidence in ability could provoke anxiety and/or have a de-motivating effect. Conversely, when participants knew they were not yet competent in something, but believed that they could develop competence or improve ability through effort, there could be strong motivation and effort in activity participation. This was evident in their choices to do activity in order to further themselves, grow and change themselves. This suggests that they held what Bandura and Dweck (1985) call an incremental theory of ability, and is consistent with their finding that belief in the potential for effort to affect ability, positively influences effort, inferred in studies of persistence.

There was also evidence that the personal importance of doing well on the task (attainment value), positively influenced effort. For example, Ethan put extra effort into his collage in order to do well, progress towards discharge and receive praise from the therapist (section 6.4.1). Motivation for attainment could be observed in signs of effort: due care and attention to doing the activity, diligence or trying to do something to the best of one's abilities. A lack of this value could be observed in converse behaviours i.e., signs of lack of effort. An example of this is the lady making a bag for sale in the shop (section 6.8.1).

Attainment value may also have relevance to the patient participants who put in effort because they wanted something of themselves, i.e., to show or confirm who they are to others and to

themselves. Attainment value relates to the relevance of engaging in an activity in order to confirm significant aspects of one's actual or ideal self-schema (Eccles 1998; Feather 1988; Rokeach 1979).

The value of effort to attainment, achievement, or fulfilment of some kind, resonates with occupational therapy theories. For example, Schkade and Schultz (1992) described a consequence of activity participation as "a state of competency in occupational functioning towards which human beings aspire" (p. 831), indicating the relevance of motivation. This is also described as occupational competence by Kielhofner and Forsyth (2001). In terms of wanting something of oneself in activity participation, this echoes occupational therapy theory and research regarding how activity participation is an essential aspect of one's identity (Christiansen 1999; Kielhofner et al. 2001; Kielhofner 2008). Wilcock (1998) brought to the profession's attention the notion of doing, being and becoming. The latter holds ideas of potential, growth and transformation through activity participation (Wilcock 1998; Kielhofner 1983). Many occupational therapy theorists explain how activity participation is motivated, and can result in satisfying experiences and outcomes, including bringing about change in one's self, ultimately influencing health and well-being (e.g., Kielhofner 2008; Fidler & Fidler 1978; Schkade & Schultz, 1992; Hammell 2004; Hatchard & Missiuna 2003; Meyer 1922; Wilcock 1998; Yerxa 1998). The potential for change to result from activity participation is documented in qualitative studies (e.g., Gewertz & Kirsh 2007; Griffiths 2008; Mason & Conneeley 2012; Eccles et al. 2003; Rebeiro & Polgar 1999; Lyons et al. 2002).

Intrinsic value was a significant influence on effort. When participants were intrinsically motivated to do something, they did activity that was new, interesting or meaningful, and for enjoyment and satisfaction, including the satisfaction gained from meeting challenges and achieving goals. These activity characteristics and reasons for doing activity are indicative of intrinsic motivation, as described by Self-determination theory (Deci & Ryan 1985, 1991, 2000). The positive influence of intrinsic motivation on participants' effort was observed in the following positive signs of effort, which have also been found to be indicative of intrinsic motivation in other studies: enhanced interest, engagement and performance, persistence (Deci & Ryan 2000); and energetic or vigorous performance (Purcell 1982; Deci 1992). Beliefs, values, interest and their relations to activity participation, is also described in theory of occupational behaviour, such as in the occupational therapy Model of Human Occupation (Kielhofner 2008). Volition is defined as a pattern of thoughts and feelings about oneself in the world, pertaining to one's values, beliefs about effectiveness and interests (Kielhofner 2008). Positive and negative evaluations of the self in

relation to activity participation in these respects, influences occupational performance. This model is well researched, although does not explicitly relate activity participation to effort, although effort is an undefined component of assessment as discussed in the literature review.

Another indication of intrinsic motivation is an attitude of willingness to do activity (Deci & Ryan 2000a). In the current study, attitude was highly influential on effort as it ultimately manifested in the quantity and quality of effort in activity participation. The more positive the attitude towards doing, the greater the effort. Attitude is thoughts and feeling (Ajzen 2001), and in making a decision, an individual consults his feelings about a choice (Schwarz & Clore 2003). Highly positive attitudes were more evident in participants that were intrinsically motivated for activity participation than those that were extrinsically motivated. Hence, highly positive attitudes correlated to a high degree of motivation strength and effort. Positive attitude manifested in willingness, eagerness and enthusiasm for activity participation. In contrast, having to do something for extrinsic reasons, particularly when controlled by others, generated more negative attitudes of resentment or unwillingness, as maintained by Deci and Ryan (2000b). Examples in this study is Hannah (older person, cohort 3) having to do the gardening in order to conform with social expectations (6.4.1), and having to abstain from active engagement in activity to comply with ward rules (6.4.1). In the former, there was effort exerted in doing something that lacked intrinsic value; in the latter there was a negative feeling of effort due to the dissatisfying experience. The latter resonates with the Self-determination theory proposition that dissatisfying, extrinsically controlled performance can result in a feeling of being drained of energy (Deci & Ryan 1985, 1991, 2000).

8.5.1 Decision-making process: getting motivated

Many participants spoke of not feeling positive about the activity participation, but did it anyway. This was sometimes a result of negotiating their way through, managing and coping with their negative feelings. In doing so, they could reason with themselves about why they should do the activity. Through this process they could get themselves motivated, or at least do the activity, even if not motivated. An example was Margaret who really did not want to do her mother's shopping, but talked herself into doing it (section 6.5.2). In Margaret's case, each week it felt 'touch and go' as to whether she would do the shopping, because it was a stressful experience that she had a highly negative attitude towards. As proposed by Lazarus and Folkman (1984), making decisions regarding stressful situations influences emotions and how a stressor is coped with. There can be passivity or a desire to withdraw, as was evident in Margaret's account of avoidance

of doing the task, followed by suddenly driving into the supermarket car park, apparently without a conscious decision to do so.

When lacking in motivation, others could have a positive influence on decisions for effort. This was most obvious in patients who lacked awareness, but once this was developed or recovered, they could become motivated by being guided through the same weighing-up process as others. When motivation and effort waned, a decision to sustain or increase effort could also be encouraged by the presence and/or verbal encouragement of others that were actively engaged in the same activity. For example, whilst running a race, swimming, or doing craft activities that received positive feedback. The views of others in terms of family or society at large, was also influential on putting-in effort, in order to meet moral obligations or uphold societal standards.

Participants also increased their motivation by modifying activity participation in order to make it seem, or be more do-able. For example, doing all of the housework in one morning, as this was more tolerable than having to do it throughout the week; changing routines so that activities could be done at a time in the day when there was optimal energy, and making activities easier, such as in the example of Sam's flower mosaic (section 6.9.3). Modifying, or adapting activity participation in order to do it, or to maintain participation is recognised in coping strategies employed when fatigued (Roche & Taylor 2005). Jackson et al. (1993) suggested that participation is not necessarily dependent on absence of constraints, but on negotiation through them in order to modify participation. In this respect, as found in the current study, the strength of motivation for participation is crucial to overcoming constraints.

8.5.2 Is it worth the effort?

With regards to weighing-up, the above factors, beliefs and values were considered in relation to the cost of doing, or not doing an activity. With respect to effort, essentially participants considered whether doing the activity would be worth the effort. What made activity participation worth the effort, was individually determined. A decision in the positive could indicate strength of motivation, depending on how great the challenge of activity participation was, its importance, and/or how great the cost. Decision-making in relation to cost in effort is also described in Expectancy Theory of Motivation (Vroom 1964), Motivation intensity theory (Brehm et al. 1983), and the Motivational control model of executive control, effort and fatigue (Hockey 2013).

8.6 Contribution of the findings to the Theory of Creative Ability

The need for the current study arose out of the realisation that within the Theory of Creative Ability there is no definition of effort and an inadequate definition of maximum effort. Consequently, the theory is incomplete, and establishing a shared understanding of their meanings is problematic. What is more, without an understanding of maximum effort, the logical rigour of the causal statement that maximum effort leads to change, cannot be established. Therefore, the purpose of this study was to discover a formal theory of effort, from which definitions of effort and maximum effort may contribute to the Theory of Creative Ability (du Toit 1973, 1974a). This section relates specific findings from the current study to the Theory of Creative Ability, in order to discuss the potential contribution of the emergent theory to the Theory of Creative Ability.

8.6.1 What is effort?

In the Theory of Creative Ability, activity participation through which an individual may realise tangible and intangible outcomes, is the process of being involved in activity, requiring self-application (du Toit 1963; 1970). Action for this is the *exertion of motivation into mental and physical effort* (du Toit 1970, p. 22). There is congruence between these ideas and the finding that effort is the exertion of one's self, including motivation, seen as application of the self and active engagement. A contribution of this study is in defining effort and indicating how effort may be observed in active engagement.

In keeping with this study, du Toit maintained that motivation and action are interdependent, therefore the quality of motivation is expressed in the quality of activity participation. Whilst du Toit describes broad changes in quality of performance (action) in relation to changes in motivation and abilities, how these relate to effort is unclear other than effort also changes. This study provides clarification by describing its quantity and quality dimensions, and how quality may be observed along a continuum from minimal to maximum effort.

8.6.2 What is maximum effort?

Du Toit defines maximum effort as to “in span all his resources – to try his hardest” (du Toit 1974b, p. 44). The term *in span* is a South African verb meaning to harness an animal. *In span* may not be a familiar term to occupational therapists in other countries, but du Toit's definition suggests a conceptualisation of maximum effort as drawing upon all of one's resources in activity participation. This also is congruent with this study's finding that maximum effort is the *motivated*

exertion of one's mental and/or physical functions, abilities and/or skills to the fullest that one is capable of, in the doing of a specific activity. However, unlike the current study, du Toit does not differentiate maximum effort from effort that is exerted, but not necessarily to the maximum.

Du Toit (1970) suggests that one's current ability is evident in the activity participation that can be undertaken without anxiety - performance that one can do freely. The edge of one's ability is evident when activity participation is demanding, an indication of which is anxiety (du Toit 1970). On the boundaries of one's ability, is maximum effort (du Toit 1970). In comparing these ideas to the current study, the area of current ability sounds like activity participation for which there is no effort in the comfort zone; familiar activity participation that is easily done without anxiety. The current study also conceptualises maximum effort as being located at the edge of one's abilities, but this is not necessarily bordering anxiety-free activity participation. It is of course possible that whilst in the comfort zone, one may be presented with a significant challenge that requires a rapid transition from no effort into maximum effort. However, this does not encapsulate the usual experience of daily life. The idea that there is either no effort or maximum effort, is too simplistic. This is illustrated by the fact that the effort experienced and described during the study, was not maximum effort. Rather, it was effort that varied in quantity and quality in relation to demands of varying intensity, depending on the person-activity-environment dynamic.

Finding variability in effort is not incompatible with the Theory of Creative Ability. Indeed, varying quantity and quality of effort is inferred by the mention that effort can be *feeble* when there is limited functional ability (du Toit 1974a), although feeble is not a term that adequately explains quantity and quality of effort. Furthermore, the two tools used in contemporary practice to measure creative ability, suggest variability in effort in their descriptors of effort. In the Activity Participation Outcome Measure (Casteleijn 2000), descriptors range from no effort, to minimal effort, to putting in effort, and sustained effort. Similarly, in the Creative Participation assessment tool (van der Reyden 2005, 2014), the descriptors are: no effort, minimal, not sustained, sustained. However, the meaning of minimal effort is not the same as that of the current study; it implies a limited, or short amount of effort. In the current study, minimal effort emerged as: *the consciously decided upon, minimal use of one's mental and/or physical functions, abilities and/or skills, compared to that which could be used; consciously doing less than one is capable of in relation to a specific activity.* The different use of the term minimal, illustrates the problems of attempting to operationalise a construct before proper conceptualisation. If the emergent

grounded theory of effort is to actively contribute to the Theory of Creative Ability, a consensus would need to be reached on the terms used to describe variability in effort.
It has been useful to compare this study's findings with du Toit's assertion that maximum effort is at the boundary of current ability, because it has brought to my attention the possibility that there could be a direct transition from no effort in the comfort zone to maximum effort. Equally, one might change from minimal to maximum effort, without transversing the effortful zone.

8.6.3 What are resources?

Du Toit uses the term resources to mean the total person: psyche and soma, vitalised or energised by motivation (du Toit 1972, 1974a). As such, resources is all that one is, shaped by one's personality, culture and history. The findings of the current study fit this notion of resources precisely.

8.6.4 What is the function of effort?

As in the current study, du Toit's conceptualisation of resources is connected to the perspective that activity participation is essential to living. Similar to this study, du Toit adopts a philosophical understanding of activity participation, drawing on existentialism in the work of Buber. Du Toit (1963) views activity participation as action on the world, originating in one's self, in one's relation to one's self and the external world. This is relatedness as described by Buber as the I-It relatedness of manipulating people and objects in our worlds, and the I-Thou relatedness of directly entering relatedness with people and things in a mutually *shared* world, influencing each other (Buber 1947). It is through relatedness, seen in action or activity participation that there is the experience of living, and the potential for growth and realisation of one's capabilities and potential i.e., realisation of one's self (du Toit 1963). Du Toit (1963) concluded that human beings have an inherent need for, and seek to express their volition/themselves, and that this occurs in his relatedness to himself and the external world in activity participation. To du Toit, activity participation is action on the world, which is the "exertion of drive and mental and physical effort" (du Toit 1974a, p. 6). Thus, as in the current study, relating through effort is fundamental to living. Therefore, the function of effort, although not explicitly stated by du Toit, can be assumed to be the same as the finding for function of effort in this study.

In the current study, putting in effort had the potential to result in change, or attainment of a goal or reward. These were tangible and intangible outcomes of effort. This is congruent with du Toit's assumption that effort results in a product, as illustrated in Figure 8-1, reproduced from Chapter

One (Background to the Study). Du Toit also maintained that products of effort could be tangible, or intangible. A significant finding that is not compatible with du Toit's assumptions, is change in ability could result from effort, not necessarily maximum effort. The causal statement in the Theory of Creative Ability is that "existing creative ability only increases with effort at the frontiers of that ability (i.e., maximum challenge and maximum effort)" (du Toit 1970, p.28). This assumption was not supported by the accounts of participants.

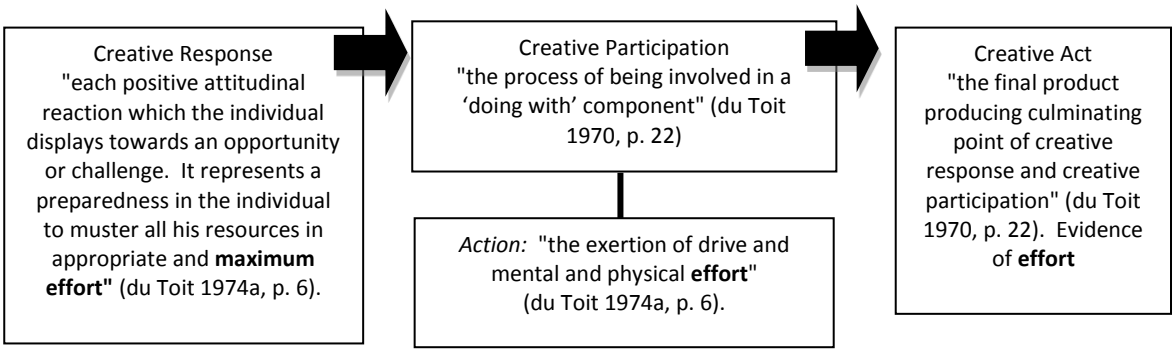


Figure 8-1 Reproduction of Fig. 1-2 Creative response, creative participation, creative act and their relationships

8.6.5 What is the process leading to effort?

Du Toit postulates that in order for there to be activity participation, therefore effort, there needs to be a *positive attitudinal reaction* towards an opportunity or challenge; a decision that encompasses preparedness to exert effort (du Toit 1974a, p.6) (Fig. 8.1). Du Toit (1970) suggested that as a precursor to effort, a positive reaction occurs when pleasurable activity participation is anticipated. In this study, a decision for effort was also identified as preceding effort. The decision was also conceptualised as an attitudinal reaction, or response to specific activity participation. Attitude related to motivation and ultimately determined the quality of effort - the more positive the attitude, the greater the effort. Activity participation did not however, have to be pleasurable in order for there to be a positive response. A broader range of activity participation outcomes were motivating of effort, including pleasure, but essentially attitude was influenced by prediction or anticipation of how satisfying the activity participation and/or its outcome would be, in relation to the amount of effort required. Since the 1960-1970 era of du Toit's theorising, the occupational therapy profession has progressed its understanding of what motivates people to do things, beyond the idea of pleasure. This study, in discovering the process leading to effort, confirms that there are many factors that influence motivation. To the Theory of Creative Ability, it contributes greater understanding of what is considered in order to arrive at an attitudinal response. Furthermore, it identifies that a continuum of attitude from highly positive to highly negative, relates to quality and quantity of motivation, and ultimately to variability in effort.

8.7 Conclusion

Much of the current study's findings are congruent with other research findings and theoretical works, from biological, cognitive and behavioural perspectives. Particular aspects of the emergent theory are supported in the literature. These are: the decision-making process, the link between awareness, attention, attitude, motivation and effort, and the variability of effort from minimum to maximum. The key aspects of discussion revolve around the current study's finding that resources constitutes one's total self; effort is consciously exerted in relation to demands that are individually defined; effort can be a negative feeling state; effort is a fundamental criterion of the self for relating, and observable referents of effort. With respect to these findings, the current study offers new and fresh insights. A contradiction arising from the findings is in relation to the conditions of effortless activity participation compared with the description of effortless during flow experiences. How demands and challenges are conceptualised, is also an area for consideration.

With regards to the Theory of Creative Ability, the key aspects of the emergent grounded theory are compatible with its theoretical assumptions. The main discussion point is that minimum effort in the current study does not fit du Toit's mention of feeble effort, and that effortful activity participation is differentiated from maximal effort.

CHAPTER NINE

The Formal Grounded Theory of Effort for Relating

9.1 Introduction

This chapter explains the process of extending the emergent grounded theory into a formal grounded theory. This is followed by the presentation of the formal theory of effort, leading to its diagrammatic model.

9.2 The process of formalising the emergent grounded theory

The primary focus of the current study has been to investigate the phenomenon of effort and maximum effort in relation to activity participation, in direct approaches using Grounded Theory Methodology leading to formal grounded theory development.
Formal grounded theory can be generated using a number of approaches, but is underpinned by data in a substantive area, preferably a substantive grounded theory (Glaser 1978). The core category of a substantive theory is seen to work beyond the substantive area, provoking a need to study it more generally, constantly comparing the core category with other studies within and outside of the substantive area studied (Glaser 2007). The aim is to extend the core variable's general implications.

In the current study, it could be predicted that the core variable i.e., effort for activity participation, would have general implications, as it can be assumed to be a commonly experienced phenomenon. Therefore, the entire research process set out to gather data from as broad a sample as possible, comparing data on emerging concepts with other studies and literature across disciplines and scientific perspectives. Constant comparison with the literature did not include literature on effort, in order to remain open to discovery. The result was an emergent grounded theory that was not limited to a distinct substantive area, therefore arguably it already had general implications.

Formalising an emergent grounded theory requires *conceptual* comparison with other studies in other areas, and other theoretical works (Glaser 2007, 2007a). Although not anticipated, the process of reviewing the literature after establishing the emergent theory, started the conceptual comparison process. The range of literature sources was extremely broad, including numerous well established theoretical works. Reviewing this literature, followed by reviewing further literature to inform the discussion (Chapter Eight), enabled conceptual comparison. This extended my knowledge and understanding of certain concepts and their relation to effort, increasing the breadth and depth of theoretical explanation as per the process of formalising a grounded theory (Glaser 2007). This was specifically the case regarding the concepts of attention, attitude, energetic resources, effort as a feeling state, comfort zone and minimal effort. In addition to effort as a core process, the process of weighing-up also emerged. The internal deliberation of factors related to performance, determining willingness to exert effort was conceptually compared to Eccles et al.'s (1983) Expectancy-value theory, Vroom's (1964) Expectancy Theory of Motivation and Brehm et al.'s (1983) Motivation Intensity theory. The comparative review of these theories suggests that the weighing-up process follows the process proposed by these theories, providing support for its ability to explain the decision-making process. There are numerous themes, concepts and processes that are congruent with other areas of research and theoretical works, indicating generality. These include: the influence on effort of awareness or attention, demands, attitude, beliefs, values, interest, intrinsic motivation, the weighing-up process; the effort-fatigue relationship; and variability in amount of effort

Conceptual comparison of literature led to some modification of the emergent theory, extending the core category (Glaser 2007) and established its formal qualities. Writing-up the formal grounded theory served to refine certain theoretical explanations of effort, illustrating Glaser and Strauss' (1967) point that theory generation can occur up until the final proof reading stage of a study.

9.3 The formal Theory of Effort for Relating

The presentation of a formal grounded theory does not require listing hypotheses or theoretical propositions, but is best done in prose (Glaser 2007). The formal theory of effort for relating is set out below.

9.3.1 Effort

Effort is a subjective feeling of exerting one's self in activity participation, and is also a negative feeling of being drained psychologically by a lack of satisfying activity participation.

In terms of effort as exertion, effort is a conscious, intentional putting forth, application, or putting-in of the self into active engagement with activity. The self is a resource for activity participation, the precise makeup of which is unique to each individual, but includes one's energy, mental and physical function, knowledge, abilities, skills, and motivation. When attempting to do something other or more than one can already do, effort may also be described as trying, subjectively experienced as a stretch, strain or a pushing of one's self in order to attain a goal. Effort varies in quantity and quality, or amount. How much effort is put into activity participation is influenced by all aspects of the self in relation to the activity and environment, but most specifically by the individual's decision about how much effort to exert. The decision reflects the person's attitude towards, and motivation for activity participation. Therefore, effort is an expression of motivation.

Effort is not merely a matter of energy expenditure, as this can occur without a sense of effort. Effort is subjectively experienced as mental and/or physical *exertion*, the result of which is a sense that resources have been drained or depleted, or feeling fatigued. Effort can also be experienced, not as a sense of exertion, but of being drained psychologically due to a complete lack of activity participation, or activity participation that is dissatisfying. Therefore, effort is situated within, or arises from the self, and is in the relation between the self and the world. Effort can be experienced when activity participation is perceived as positive. Effort can also be experienced as negative when activity participation is perceived as negative (tedious, boring, being inactive, having no meaning). Human beings have an intrinsic, essential need to relate to the world through activity participation. The function of effort is to relate the individual to the self and the world, in the pursuit of goals and the meeting of needs, and is a fundamental criterion of the self.

9.3.2 Quantity and quality dimensions of effort

Effort has quantity and quality dimensions. Quantity of effort is the amount of one's resources, including motivation that is put into activity participation. Quality of effort is how well or intensely one applies one's self, in relation to what one is capable of doing. Hence, the quantity and quality of effort expresses the amount and intensity of motivation that a person has, and also reflects the amount and quality of other resources i.e., function, abilities, knowledge and skills.
The effort of one person may be perceived by another in terms of observable referents. Both quantity and quality of effort may be perceived in terms of the degree to which a person is actively engaged in what he is doing (Fig. 9-1). Active engagement requires actively thinking about what one is doing, effort for which is observable as doing activity with due care, attention, or diligence. Quantity and quality of effort is also reflected in ability to manage and cope with

thoughts and feelings during activity participation, particularly those that are negative. When there is anxiety or negative feelings towards doing something, but there is a decision to do it anyway, this is a sign of effort. Quantity and quality of effort is also reflected in how much a person keeps going in the face of challenges; not giving up, but persisting, persevering, or enduring. During activity participation, quantity and quality of effort may be also observed in the degree to which a person is animated, alert or energetic, and also in facial expression, posture and body language.

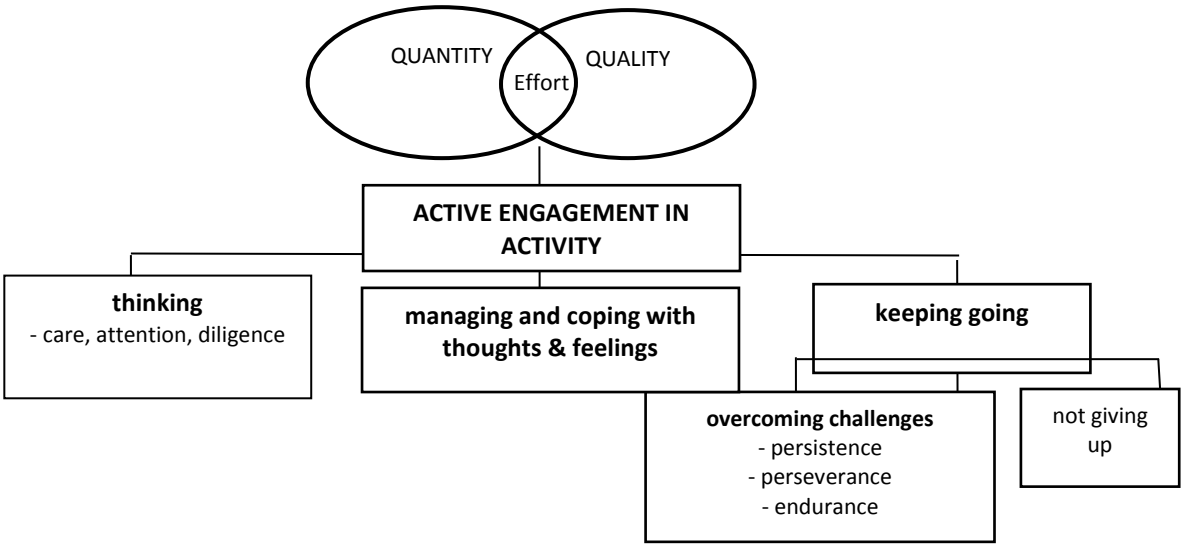


Figure 9-1 Quantity and quality of effort observable in active engagement.

In relation to activity participation demands, effort is observable in varying quantity and quality along a continuum from minimal to maximum effort. Minimal effort is the consciously decided upon, minimal use of one's resources compared to that which could be used; intentionally doing less than one is capable of in a specific activity. Minimal effort equates to lack of active engagement, observable as limited eye contact, appearing 'half here, half somewhere else', just doing, not thinking, lack of care and attention, slumped body posture, giving up although there is the ability to do the activity, and not fully doing what the activity requires, despite having the ability to do it. Maximum effort is the motivated exertion of one's resources to the fullest that one is capable of, in the doing of a specific activity. Maximum effort is observable in active engagement as previously described.

When there is a feeling of being drained psychologically due to dissatisfying or lack of activity participation, this can be the experience of minimal or maximum effort. That is, when under challenged by activity participation, rendering it boring or tedious, a person may be participating with minimal effort, which in this circumstance can feel draining. Equally, it may take maximum

effort psychologically or motivationally to stay engaged in activity that is significantly dissatisfying. However, although psychologically there is a feeling of maximum effort, this may not be observable outwardly as active engagement.

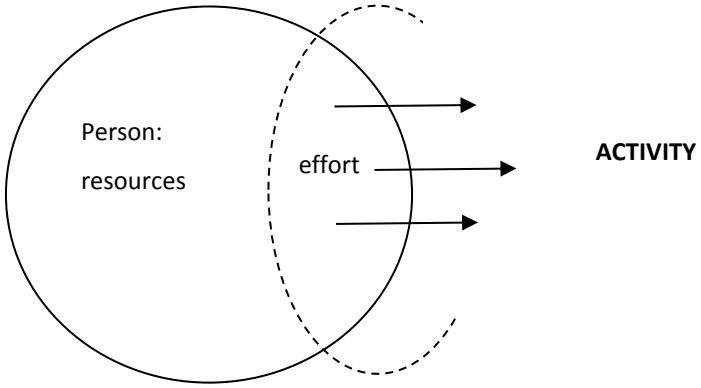


Figure 9-2 Quantity of effort exerted into activity participation

9.3.3 Conditions of effort

Effort is a relational construct. Effort is put in, or exerted in relation to activity participation. Equally, effort that is not experienced as a sense of exertion, but of being drained psychologically, is also *in relation* to dissatisfying, or lack of activity participation. Activity participation takes place when person, activity (or occupation) and the environment overlap (Baum et al.2015), as the person-activity-environment dynamic. Effort is not an experience that is inherent in activity participation, but is experienced under certain conditions. Essential conditions for effort are: awareness and attention, demands and challenges, and a decision to put in effort leading to effort.

9.3.3.1 Awareness and attention

An essential condition for effort is awareness of one's self and the world, and attention. For there to be effort, there needs to be awareness of what can be acted upon and related to (Kahneman 1973; Hockey 1986, 1997; Shiffrin & Schneider 1977; Martinsen et al. 2007). Awareness is also essential for there to be integrated, autonomous functioning (Deci & Ryan 2008).
There is also a need to pay attention (Kahneman 1973). Effort can be exerted in relation to something for as long as there is attention to it. Therefore, a person with a long span of attention has the potential to sustain effort for a greater length of time than someone with a short span of attention. Equally, effort as a feeling of being drained psychologically by dissatisfying activity participation, or deprivation of it, can only endure for the length of time that it lasts i.e., there is

awareness of, and attention to it. This feeling of effort in relation to activity participation is not to be confused with the feeling of being drained or fatigued as a result of the effort i.e., post activity participation.

9.3.3.2 Demands and challenges

Awareness and attention are requisites to effort, as these abilities are necessary to be able to relate and act on the world. Doing so through activity participation does not inherently require effort, however. A specific condition for effort is that activity participation is demanding (Kahneman 1973; DeRivecourt et al. 2008; Guadagnoli & Lee 2004; Wulf & Shea 2002; Navon 1984).

Whether or not activity participation is demanding, depends upon what it requires of an individual in terms of functional abilities and motivation. Activities and environments in which activity participation takes place, have characteristics and features that inherently require certain functional abilities and skills to be able to use, or interact with them effectively in activity participation (Thomas 2012; Hagedorn 1997; Lawton & Nahemow 1973). Activities have distinct features and demands based on the physical and socio-cultural environment in which they are performed (Law et al. 1996; Thomas 2012; Baum et al. 2015). Inherent requirements are not in themselves a demand on effort. Rather, a demand is individually defined by a lack of match between a person's resources and the functional and motivational requirements of the activity participation. When there is a mismatch between requirements and resources, activity participation can be perceived as demanding i.e., it demands something from the person that is not readily available. This makes participation in activity challenging. New or unfamiliar activities specifically demand effort, because they require concentration, information processing and attention (Shiffrin & Schneider 1977; Kahneman 1973).

Effort is experienced as exerting one's self to meet the challenge i.e., in bridging the gap, or mismatch between what the activity participation requires and one's readily available resources. The point in activity participation when effort is exerted to bridge the gap and meet challenges, is depicted in Figure 9-3. Activity can be challenging whether participation requires greater abilities than one has, or requires too little in terms of available resources. When demands are too high in relation to a person's resources (over challenging), this can evoke anxiety, overwhelm a person and prevent participation (Csikszentmihalyi 1988). Feeling under challenged can feel demanding psychologically in terms of having to manage frustration, or the boredom of dissatisfying activity participation (Csikszentmihalyi 1988; Martin 2007). Activity participation that is neither overly nor

under challenging, has the potential to elicit sustainable effort. However, the conditions in the person-activity-environment dynamic can change quickly, making activity participation more or less demanding, resulting in change in quantity and quality of effort. Thus, effort can be a state of flux. There can sometimes be a pushing forward of one's self in effort, but due to the demands that activity participation places on one's resources, there can also be a feeling of wanting to pull back from effort in order to prevent being worn out by it i.e., there is reluctance or hesitation. Effort can therefore, be a state of tension in the process of meeting the challenges of activity participation.

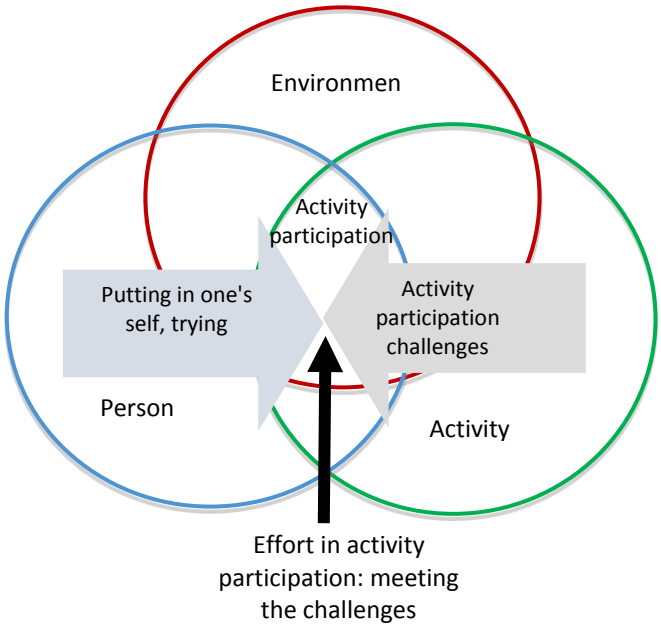


Figure 9-3 Effort as the point at which one exerts one's self in meeting the challenges in activity participation

9.3.3.3 Making a decision for effort

When effort is exerted as opposed to the feeling of being drained psychologically, effort is the result of a conscious decision to intentionally put effort into activity participation. A decision for effort is an antecedent to effort.

Arriving at a decision can occur very quickly, or can require a lengthy period of deliberation. Making a decision is a process of weighing-up various aspects of the activity participation (Eccles et al. 1983; Vroom 1964; Hockey 1997, 2013; Brehm et al. 1983; Brehm & Wright 1983; Bandura 1994, 1995, 1997; Bandura & Schunk 1981; Eccles 1987; Wigfield & Eccles 1992, 2001; Feather 1988). This includes one's thoughts and feelings about the activity in terms of interest in it, and its value (Fig. 9-4). Feelings are also attached to one's expectations or beliefs about how satisfying activity participation will be, both in terms of the experience of doing the activity and its outcome (prediction of activity participation). Beliefs include whether one can do the activity and

accomplish one's goals, and whether effort can have a positive effect on ability, and therefore outcomes (Bandura 1997; Bandura & Schunk 1981; Lent et al. 1986; Pajares 1996). In this consideration, one may think about the likelihood of achieving expectations and goals given the time and resources available - one's own resources and resources external to oneself. How much effort is needed to do it (gauging effort) may also be considered. This involves evaluating one's abilities in relation to the perceived requirements and demands of the activity. These aspects are weighed up in terms of whether doing the activity is worth the effort. The extent to which aspects are weighed-up, will differ for each individual, and influenced by quantity and quality of the individual's resources.

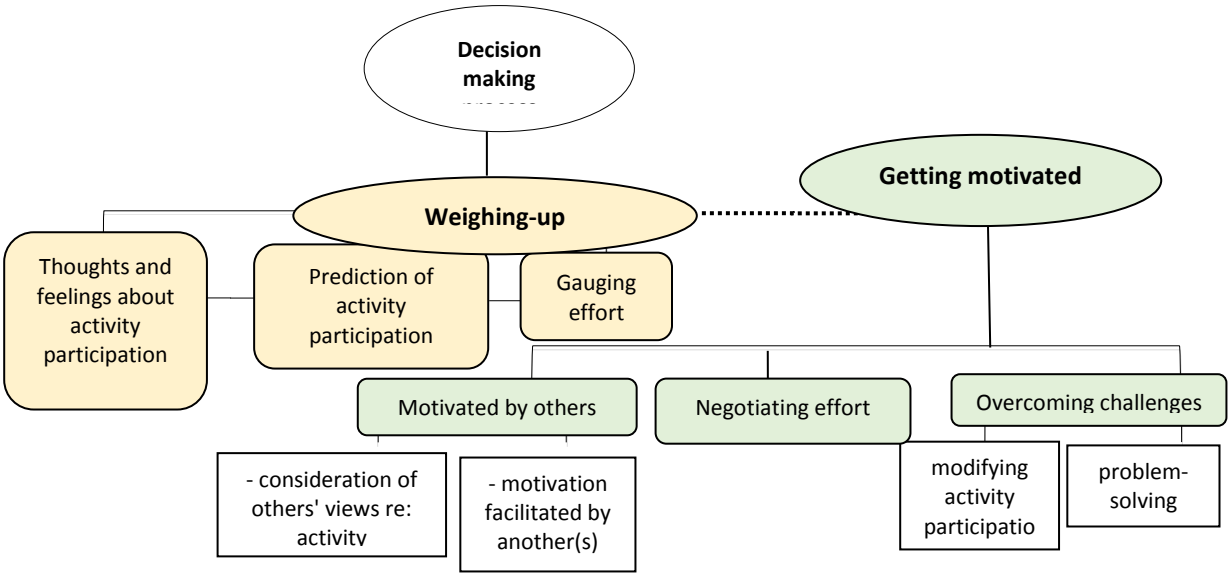


Figure 9-4 The decision-making process in the formal grounded theory.

Making a decision can be effortful in itself, especially when there are negative aspects to the activity participation to manage. In weighing-up, a person is essentially responding to how motivated he is for the activity participation. A high degree of motivation in quantity and quality, can drive the person to overcome negative feelings about activity participation, or other problematic aspects in order to arrive at a decision to do it. A person that is not very motivated may give up on the weighing-up process, and/or quickly arrive at a decision not to do the activity. The quantity and quality of a person's functional abilities also impacts upon decision-making and the resulting decision, due to different parts of the process requiring various cognitive functions in addition to decision-making such as, memory, judgment, and evaluation.

A person may find making a decision difficult, not due to functional limitations, but because he is not very motivated for the activity to do the activity. In this instance, a process of getting

motivated may be engaged with (Fig. 9-4). Motivated by others is when a person is open to, and allows himself to be positively influenced by the views of others regarding the activity participation. Motivation may also be influenced by the presence of others who are actively engaged in activity, serving as an inspiration to do activity and put in effort. Others may also intentionally engage with the person in order to elicit or facilitate motivation in varying ways. Getting motivated may involve negotiating effort, which is managing and coping with negative feelings. This involves entering into an internal dialogue with oneself about why one should do the activity. Through this process a person can get himself motivated to arrive at the decision to do activity. Overcoming challenges can also enable a person to get motivated, either by modifying activity participation in order to make it more do-able (Jackson et al. (1993), and/or problem solving in order to reduce or remove barriers to participation such as lack of financial resources to do the activity. What is considered in the sub-processes of getting motivated, are added to those already involved in weighing-up.

9.3.3.4 Decision response

In the decision to either participate or not participate in activity, is an attitudinal response i.e., attitude towards activity participation. Attitudes are mental dispositions expressing positive or negative evaluations and feelings towards people and objects in the external world, as well as towards one's self (Fishbein & Ajzen 1975; Ajzen & Fishbein 2000; Loersch et al. 2007). Attitude is a major determinant of intentional behaviour and the amount of effort a person exerts to achieve a goal (Gardner 1985; Ajzen 1985; Ajzen & Madden 1986).

The quantity and quality of motivation that sparks the decision-making process, or which develops during the decision-making process, ultimately determines the quantity and quality of effort put into activity on its commencement. During the process of doing an activity, aspects of the person-activity-environment dynamic may equally influence effort, the quantity and quality of which may change. However, at the point of deciding to do activity, the quantity and quality of effort is decided upon at the outset, reflecting attitude towards, and motivation for the activity (Fig. 9-5).

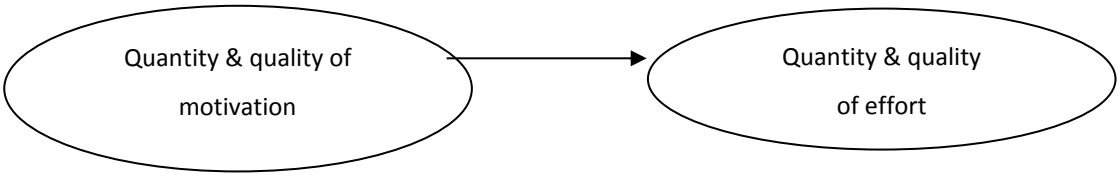


Figure 9-5 The relationship between quantity and quality of motivation, and quantity and quality of effort on commencement of activity participation.

Attitude varies along a continuum from highly positive to highly negative (Fig. 9-6), and align to quantity and quality of effort. Highly positive attitude and strong intention, or motivation is likely to result in greater quality and quantity of effort than when there is negative attitude and weak intention (Ajzen 1985; Ajzen & Madden 1986). In the latter, a highly negative attitude is likely to align with amotivation (Deci & Ryan 2000). Attitude and intention, as aspects of motivation are observable in quantity and quality of effort. Positive attitude positively influences active engagement and positive signs of effort as described in section 8.3. In addition to these, positive attitude may be observed in willingness, readiness, eagerness or enthusiasm to engage, all of which influence effort. Conversely, negative attitude may be observed in signs of lack of effort, as described in section 8.3.

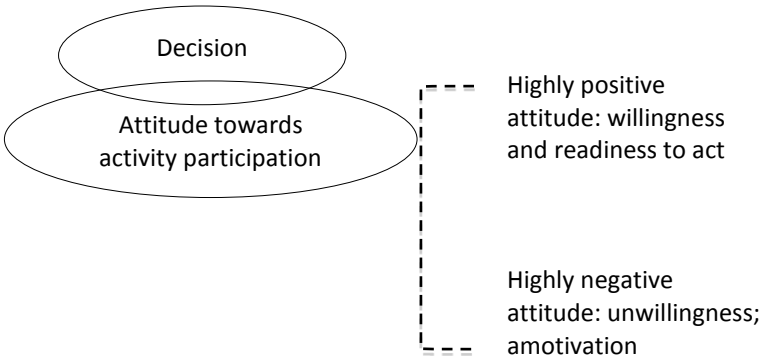


Figure 9-6 A continuum of positive to negative attitude within a decision relating to participating in activity.

Attitude is likely to be shaped by aspects of the decision-making process. For example, if the activity is of little interest or value to the person, and/or he predicts that doing it will be a dissatisfying experience, this may result in negative attitude towards, and little motivation for activity participation. Activity that is intrinsically motivating is more likely to evoke a positive attitude and greater effort, than that which is extrinsically motivated, or is externally controlled (Deci & Ryan 2000b). The latter is more likely to generate negative attitudes of resentment, or unwillingness (Deci & Ryan 2000b). Unwillingness may be observable as lack of active engagement in activity and in signs of lack of effort, or minimal effort.

9.3.4 Consequence of effort

The consequence of effort relates directly to the function of effort, and the quantity and quality of effort. The function of effort is to relate a person to himself and the world. The meaning of one's relatedness, and the needs underpinning it will differ for each individual. However, effort is an expression of motivation, therefore during activity participation effort is exerted in order to

achieve goals, and fulfil wants and needs. What these consist of, is individually defined. Equally, the consequence of exerted effort will be unique to each individual, although through the process of exerting effort during activity participation, there is the potential to increase one's knowledge, skills and/or abilities.

When effort is experienced as psychologically draining during dissatisfying activity participation, this sense of effort alerts the individual to lack of need fulfilment. The response to this is individually determined.

In the process of putting in effort, energy is expended, therefore effort may lead to a feeling of fatigue (Hockey 2013; van der linden 2011). However, putting in effort can also be invigorating. The effect of effort on the energy state of the individual will depend upon the quality and quantity of effort exerted, and how it is subjectively experienced.

9.3.5 Zones of effort

The quantity and quality of effort can be categorised into four zones: no effort in the comfort zone, minimal effort, effortful activity participation, and maximum effort. In Figure 9-7, the large dark green circle represents the area of activity participation currently do-able for a person, with a feeling of effort that is between minimal and maximum in quantity and quality. At the outer border of the effortful activity participation zone, is the zone of maximum effort where challenges are at their greatest and effort is at the maximum. Due to doing activity at the boundary of one's abilities, there is a strong feeling of being stretched, strained, or of pushing one's self. Potentially, putting in maximum effort can result in extending one's abilities, increasing the area of activity participation that may feel effortful, rather than at maximum effort.

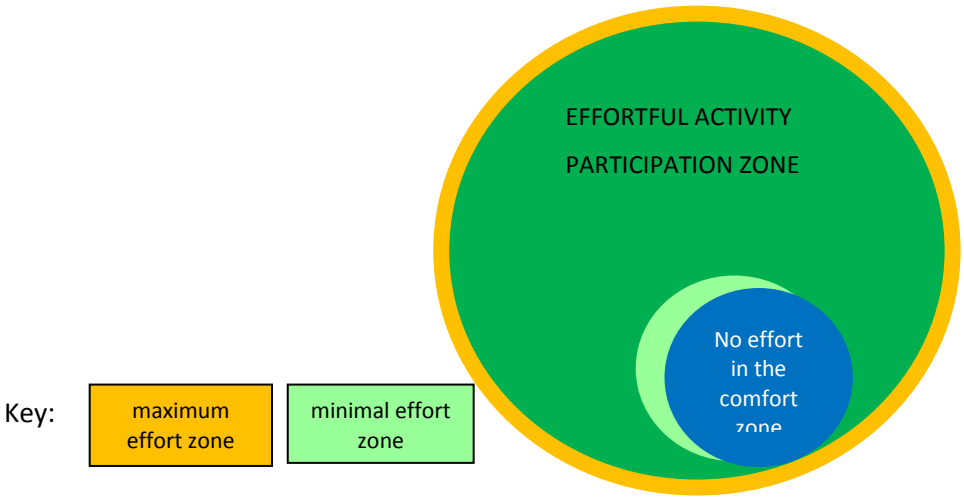


Figure 9-7 Zones of effort: no effort in the comfort zone, minimal effort, effortful activity participation, and maximum effort

In contrast to effortful activity participation and maximum effort, activity participation that is effortless is situated in the comfort zone. This is activity participation that is familiar, mastered, and is done comfortably without anxiety; done easily, habitually, automatically, and without much thought. Between the comfort zone and effortful activity participation, is the zone of minimal effort. All zones border with each other, indicating that a person can transition from one zone into any of the other quantity and qualities of effort. The off-setting of comfort zone and minimal effort, indicates that transitions can happen at varying rates. For example, a person could suddenly and directly transition from no effort in the comfort zone to maximum effort, suggested by these zones bordering each other. Equally, one might transition from the comfort zone, to doing activity with minimal effort, and then do effortful activity for a long period of time before it feels like maximum effort i.e., transverse the large expanse of the zone of effortful activity participation towards maximum effort.

The model of the formal Theory of Effort for Relating is shown in Figure 9-8.

9.4 Summary

This chapter has proposed a theory of effort for relating, to explain effort in its varying amounts in relation to activity participation, including the conditions for, process, and results of effort in activity participation.

The phenomenon of effort for relating has been illustrated as a multi-dimensional, complex construct, which has quantity and quality dimensions, and observable referents. The function of effort is to connect, or relate an individual to himself and the world. The conditions for effort are awareness, attention, demands in the person-activity-environment dynamic, motivation and a decision to put in effort. The decision-making process leading to effort involves two main strategies: weighing-up and getting motivated. Ultimately, the decision to put in effort reflects an individual's attitude towards activity participation, as an aspect of motivation.

Having proposed a formal grounded theory developed out of empirical substantive grounded theory findings and conceptual comparison, the next chapter evaluates the current study.

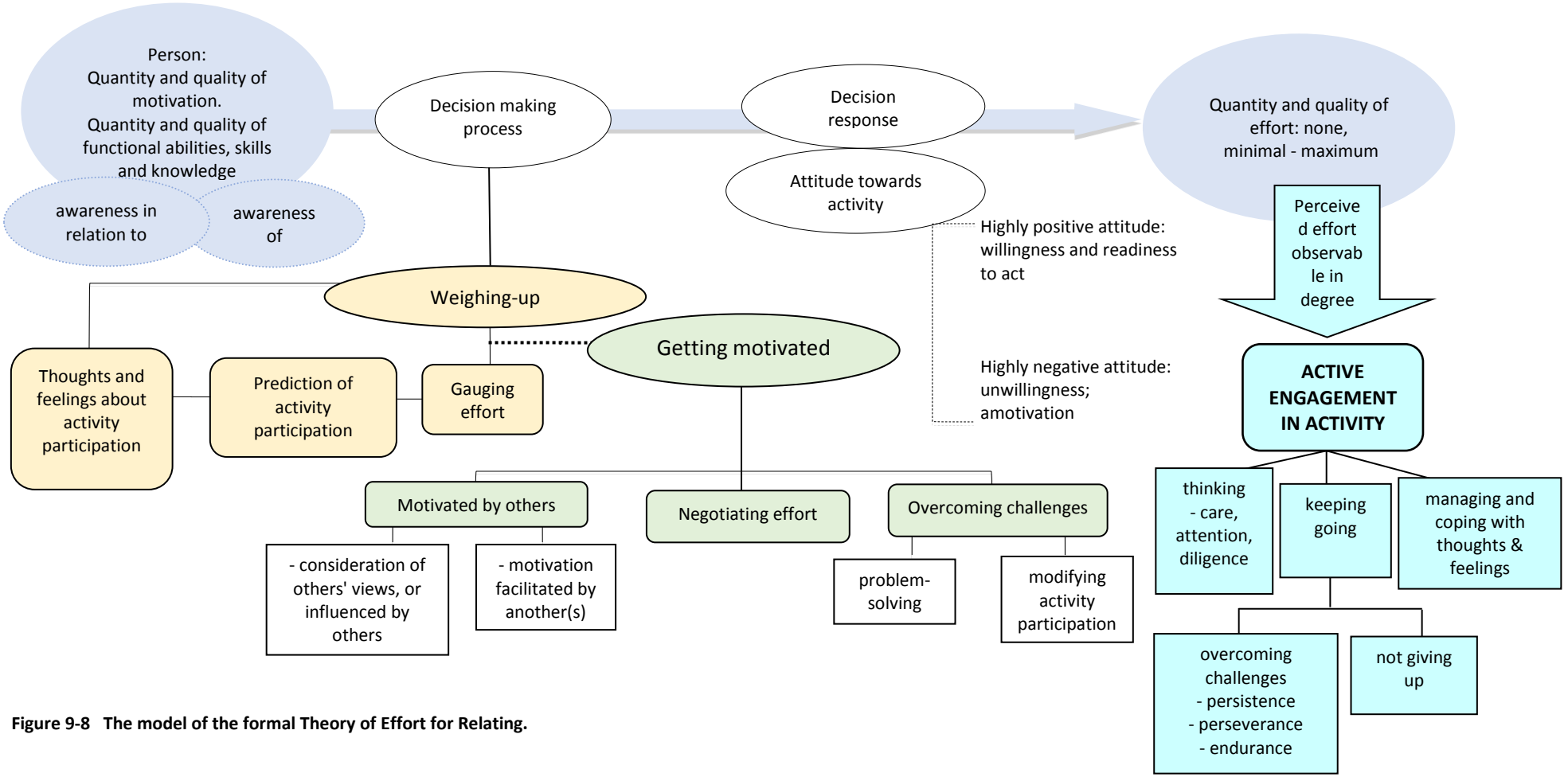


Figure 9-8 The model of the formal Theory of Effort for Relating.

CHAPTER TEN

Evaluation of the research

10.1 Introduction

This chapter evaluates the current grounded theory study, beginning with realisation of the study aims. The debate regarding criteria for evaluating qualitative and grounded theory research is then set out, leading to the selection of credibility, dependability, fit, work and relevance as the criteria for evaluating the current study. This is followed by a presentation of the strategies employed to ensure rigour in this study. Further evaluation in terms of the originality of this study, brings the chapter to a close.

10.2 Realisation of the aims of this study

The primary purpose of the study was to discover a theory that explains effort and maximum effort in relation to activity participation, including the conditions for, process, and results of effort in activity participation. This has been achieved through consistently applying the procedures for substantive and formal grounded theory development. The realisation of the current study's aims is set out below.

Stage One question: *What is the theory that explains effort and maximum effort in relation to activity participation?*

The objectives have successfully been met thusly:

- Effort and maximum effort for and/or during activity participation have been described and explained, together with comfort zone and minimal effort.
- The conditions under which effort and maximum effort occur have been explained as awareness and attention as requisites for effort; demands in the person-activity-environment dynamic; a decision for effort.
- How the context / environment influences effort and maximum effort has been explained in terms of inherent requirements, activity participation demands and challenges.
- The action and interaction strategies that describe effort and maximum effort have been explained as verbal and nonverbal signs of effort

- The consequences of effort and maximum effort have been explained in relation to the function of effort and fatigue.
- The process of effort and maximum effort has been explained in the conditions for effort, function of effort, the decision-making process and transitions between zones of effort.

Stage Two question: *Is the theoretical construction of effort and maximum effort plausible?*
The objective to answer this question was achieved by the focus group finding that the emergent theory had fit and provided understanding of effort and maximum effort to occupational therapists and members of the public. The development of an emergent theory from broad rather than narrow substantive areas, followed by establishing its formal qualities and generality, also indicates that the theory has fit, although this must ultimately be decided by the reader.

Stage Three question: *What is the contribution of the theory of effort and maximum effort to the Theory of Creative Ability?*
The formal theory of effort has been aligned with the Theory of Creative Ability, identifying its compatibility in terms of the meaning of effort and maximum effort, the function of effort and the relation between decision-making and effort. The Theory of Creative Ability currently lacks a definition of effort and has an inadequate definition of maximum effort. The definitions arising from the current study may contribute to resolving this problem.

Having established that the current study's research questions and objectives have been addressed, this chapter now progresses to evaluate the current study using relevant criteria.

10.3 Criteria for evaluating grounded theory research

Within the qualitative research literature, there has been lengthy debate regarding how best to assess the quality of qualitative research (Mays & Pope 2000). Central to the debate is the view that due to the difference in the philosophies and processes for qualitative and quantitative research approaches (Morse 2006), alternative criteria are needed for evaluating qualitative research from those used for quantitative research. For quantitative research, objectivity is one of the most important criteria by which the research is judged, comprising of validity and reliability. Validity refers to the truthfulness of findings, or the extent to which research measures what it is supposed to measure; reliability refers to the stability and reproducibility of research findings (Klenke 2016). Although there is not complete agreement on their unsuitability for qualitative research, validity and reliability are widely discussed as being unsuitable criteria to apply to qualitative research because they are based on positivistic assumptions (Finlay 2006). Qualitative researchers more commonly evaluate research in terms of its *trustworthiness*, referring to the

degree to which the findings authentically reflect the perspectives and experiences of the participants (Barbour 1998). To evaluate trustworthiness, numerous guidelines, criteria and standards have been proposed (e.g., Glaser & Strauss 1967, 1993; Lincoln & Guba 1985, 1989; Lincoln 1995; Mays & Pope 2000; Morse et al. 2002). The most commonly referred to criteria is that of Lincoln and Guba (1985), who translated internal validity into credibility; external validity to transferability; reliability to dependability, and objectivity to confirmability. How well a study meets these criteria, is an evaluation of its trustworthiness (Guba & Lincoln 1985; Holloway & Wheeler 2010).

Specific to grounded theory research, Glaser and Strauss (1967) state that criteria for evaluating a grounded theory study, reflect the aim of grounded theory research i.e., achievement of fit, work and relevance. Fit is when the theory is recognisable and understood by those involved in the phenomena studied; work refers to a workable, plausible understanding and explanation of the phenomena provided by the theory (Glaser & Strauss 1967). Relevance is whether the theory addresses problems and processes in the world studied (Glaser & Strauss 1967). Subsequently, the reader is best placed to judge whether the grounded theory is a recognisable, understandable and plausible account of how people resolve problems in social contexts (Glaser & Strauss 1967). Nevertheless, it is still important to gain assurances of the rigour of the grounded theory study. Glaser and Strauss (1967) assert that credibility, as ensuring accuracy of data, is dependent upon establishing that methods in the grounded theory approach have been properly applied, and that the resultant theory has fit, work and relevance (Glaser & Strauss 1967). When Glaser and Strauss (1967) used the term credibility, they were using it to mean believable theory, rather than valid (Corbin & Strauss 2015).

Subsequently, rigour is judged by the detail provided by the researcher of the strategies used for collecting, coding, analysing and presenting data during theory generation (Glaser & Strauss 1967). Strauss and Corbin (1990; 1998) identified seven criteria for evaluating the research process and eight criteria for evaluating the empirical grounding of the study, deferring to validity, reliability and credibility as the specific criteria. Glaser (1992) also suggested modifiability as a criterion, meaning whether the theory allows for variation and change to make the core theory useful over time (Charmaz 2006). Thus, there is a plethora of terms for the grounded theory researcher to navigate. This made the process of identifying suitable criteria for evaluating the current study rather complex, and arguably unnecessarily lengthy .

A review of various criteria (Glaser & Strauss 1967; Guba & Lincoln 1985, 1989; Lincoln 1995; Mays & Pope 2000; Morse et al. 2002), suggests that the concept of credibility is most commonly seen

to parallel validity in qualitative research, as it relates to the trustworthiness of findings. That is, that the findings are faithfully represent the features of the phenomena that the research is intended to describe, explain or theorise (Lincoln & Guba 1985; Holloway & Wheeler 2010). Similarly, the concept of dependability is most commonly seen to parallel reliability in that it is concerned with the stability of data collection and analysis methods, and the consistency of findings should be independent of the researcher's ideologies and values (Lincoln & Guba 1985). The relation between traditional criteria and Lincoln and Guba's (1985) criteria for evaluating qualitative research is set out in Table 10-1. As this chapter goes on to demonstrate, a range of strategies was employed to ensure the credibility and dependability of the current study, several of which also contribute to confirmability (Table 10-1). To avoid repetition, the strategies for confirmability are not repeated here, but are indicated in Table 10-1. The criterion of transferability is addressed in this chapter using the grounded theory criteria of fit, work and relevance. The strategies employed to ensure the rigour of the current study, are discussed below.

Table 10-1 Criteria for evaluating qualitative research based on Lincoln and Guba (1985), and strategies employed to ensure rigour in the current study.

Traditional criteria	Trustworthiness criteria Lincoln and Guba (1985)	Strategies for rigour in the current study
Internal validity	**Credibility** (truthfulness of findings)	Prolonged engagement. Multiple triangulations (data methods, data sources, theoretical). Constant comparative analysis. Member checking through combining observations with interviews. Presentation of raw data for dense description. Theoretical sensitivity through reflexivity. Reflexivity. Checking for reactance.
External validity	**Transferability** (applicability and generalisation of findings to other contexts or groups)	Multiple cases. Cross-sample comparison. Cross national comparison.
Reliability '	**Dependability** (consistency of findings and ability to replicate)	Dense description - audit trail. Theoretical sampling. Rigorous multiple stages of coding. Code, re-code timeframe. Triangulation.
Objectivity	**Confirmability** (findings shaped by participants, not researcher bias)	Triangulation. In vivo coding; presentation of open and selective codes. Full interview transcription. Field notes of observations. Theoretical memo writing. Reflexive diary. Audit through theoretical memos

10.4 Strategies for credibility and dependability

The credibility and dependability of the current study is demonstrated in numerous ways. Prolonged engagement is considered to enhance the credibility of a study (Lincoln & Guba 1985), because it allows submersion in the research field through which recurrent features of the phenomena under study can be identified. In this respect, the credibility of this study was enhanced by the extended period of time that I spent at the hospital sites during Stage One, conducting multiple observations and interviews. This allowed, through constant comparative analysis, the identification of patterns in behaviours and interactions to do with effort in activity participation, and from which patterns in conceptualisation emerged. Theoretical construction was checked against participants' meanings of the phenomenon through combining observation with interviews. Observation is particularly useful for seeing for oneself the experience of events that participants describe in interviews, while interviews provide the opportunity to check participants' meanings. As codes developed from observation and initial interviews, questions asked in subsequent interviews were modified based on analysis of each previous interview. This strategy ensured credibility and dependability as it made the research focus accurately on describing the features of the phenomena.

The use of observations and interviews is a method of triangulation, which enhances credibility. Triangulation is the use of more than one method of data collection or data sources to examine the phenomena under study, in order to enhance confidence in the ensuing findings (Braun & Clarke 2013). Multiple types of triangulation (Table 10-2) allowed for convergence and checking of multiple perspectives. Multiple data collection methods and data sources were used within the grounded theory approach. For example, sampling was undertaken cross-nationally, and theoretical sampling was used to sample diverse groups of people for a broad range of factors that might affect variability of behaviour in relation to the phenomena under study, enhancing credibility (Mays & Pope 2000). Theoretical samples were chosen based on emerging theoretical ideas, putting emerging hypotheses to a severe test of trustworthiness. The recruitment of a large sample (n=71) comprising of several diverse groups, enhanced precise theory formulation and the credibility of subsequent explanations of the phenomena (Charmaz 2006). Comparison of sample groups maximises the credibility of theory by identifying similarities and differences, enables the researcher to theorise better than if only one group was sampled, because hypotheses can more clearly emerge. This enhances the researcher's ability to identify the potential applicability of the theory.

Table 10-2 Methods for triangulation employed in the current study.

Triangulation type	Means of triangulation
Within-method triangulation of data methods (use of two or more different methods from within a methodological approach Begley1996)	Observations, interviews, theoretical memo writing, field notes, reading literature, general discussions
Triangulation of data sources (using variety of different sampling strategies and sources for data collection Begley1996)	Sample: cross-national; for broad variation; range of settings and activity participation experiences. Media; personal knowledge and experience; literature
Theoretical triangulation (using multiple theories)	Literature across disciplines

Theoretical triangulation is sampling from differing theoretical perspectives in order to add to understanding of phenomena (Hoque et al. 2013), or to increase depth of understanding. This was achieved by sampling literature from across fields, disciplines and theoretical perspectives. This enabled the gaining of new insights and understandings without bias to a particular perspective. As discussed in Chapter One, a review of the literature was not conducted until the theory was generated. This practice helped to limit the influence of previous theoretical constructions on the theory developed, enhancing dependability. The influence of the literature on the findings was monitored through undertaking theoretical sampling for the selection of literature, constant comparative analysis of the literature, and the writing of theoretical memos on the literature.

Credibility is enhanced when the researcher evidences that Grounded Theory Methodology was applied correctly. In this study, dense description of the research process and methods demonstrates that the classic grounded theory methods were consistently applied throughout the study. The use of theoretical memo writing is a major factor in ensuring quality in grounded theory research (Birks & Mills 2015), providing a version of an audit trail (Cooney 2011). In this study, these are sufficiently detailed for review to determine the quality of this study in terms of the research process. Examples of theoretical memos are provided in Appendix G.

A threat to credibility in research that uses observation is reactance (Stangor 2003). Also known as the Hawthorne Effect, reactance is an undesirable behavioural response from participants caused by their awareness of being observed. Altered behaviour would not be natural, making it difficult to distinguish normal behaviour from changed behaviour, threatening the credibility of the study. However, I did not seem to be noticed much by patients, who were engrossed in activity participation. As discussed in Chapter Five (Ethics), altered behaviour by one of the occupational therapists due to anxiety of being observed, was addressed. This enabled her to perform

naturally. There was no other indicator of reactance, which enhances this study's credibility on the basis that data was gained from natural settings and behaviours.

Data collection in Stage One was conducted over several distinct time periods, allowing time in between interviews. This allowed sufficient time for iterative data collection, analysis and theory-building. Credibility and empirical grounding of the theory was achieved through codes arising from the data, not as a result of theoretical conjecture or *a priori* concepts. Credibility is enhanced through using participants' own language for *in vivo* coding, forming the building blocks of the theory (Strauss & Corbin 1990). This was possible because interviews were recorded and transcribed verbatim. This also meant that interviews could be listened to many times, ensuring close attention to participants' accounts and meanings. The dependability of the findings was enhanced by undertaking code-recode procedures several weeks apart and comparing the findings. This was undertaken multiple times, finding consistency in the findings giving confidence to dependability.

Within the findings, examples of data are presented to enable the reader to "see and hear" the participants (Glaser & Strauss 1967, p. 228). This enhances credibility because the reader is able to judge whether conceptualisation and theory development is adequately supported by the data (Glaser & Strauss 1967; Mays & Pope 2000). Clearly articulated, detailed findings also contribute to credibility because they support the reader to judge whether the theory achieves of fit, work and relevance.

In grounded theory research, reflexivity is not necessary to guard against researcher bias, because Grounded Theory Methodology has adequate in-built methods for verifying emerging categories and their indicators. However, a valuable use of reflexivity in grounded theory research is as a tool for examining each stage of the research process (Hand 2003). In this study, reflexive accounts of the research methods employed and the ethics of the study were documented in a personal journal. The discussions presented in Chapter Five (Ethics) and Chapter Eleven (Contributions and Recommendations), are borne out of these accounts, making clear the decisions regarding how participants were sampled and data were collected. The structure of this thesis also reflects an attempt to take an overall reflexive approach by making the whole research process transparent, thereby providing a clear trail of decision-making at every stage of the study. Due to the complexity of the current study, demonstrating rigour became a lengthy undertaking, but is necessary.

Through use of reflexivity, theoretical memo writing and constant comparative analysis, any bias that my ideas from personal and professional experience brought to the data, were discarded if they did not pattern out with the other data. This is discussed in Chapter Eleven (Contributions and Recommendations). Having undertaken the study without a preconceived theory or hypothesis, applied the processes of constant comparison, substantive coding, identification of concepts and categories and theoretical coding, emergent theory "is truly grounded in the data, because it came from nowhere else" (Allen 2003, p. 3).

10.5 Strategies for fit, work and relevance

The criterion of transferability (Lincoln & Guba 1985), in my view is best evaluated according to the key evaluative criteria identified for grounded theory research, of fit (Glaser & Strauss 1967), and generality of formal grounded theory. Beck (1993) refers to transferability as fittingness, which relates to demonstrating that the findings are meaningful and applicable to others and fit into contexts other than that of the study (Sandelowski 1986). The focus of this study was not a defined substantive area, but the human experience of effort in relation to any activity participation. Therefore, the meaningfulness and applicability of the findings cannot be judged based on similarity to the reader of the contexts or demographics of the people studied. As Morse and Singleton (2001) argued, what is to be evaluated is whether the *theory* is transferable. That is, as per evaluative criteria for grounded theory research, is the problem and generated theory recognisable, understandable, relevant, plausible and applicable to those it concerns? Given that the study aimed to generate a formal grounded theory, the findings should have extensive generality and fit, although this can only be judged by the reader. To demonstrate potential fit and extended generality, the parameters of the research have been delineated in terms of the sample, settings and level of theory generated. This study sampled and compared diverse groups of people and cross-nationally for multiple perspectives and comprehensive data; similarities, comparisons and contribution of concepts and theoretical works in the literature have been clearly described to show the generality of the grounded theory, and conceptualisation has been raised from substantive to formal theory.

Furthermore, the grounded theory generated from Stage One of the study was checked for fit and plausibility in the Stage Two focus group, as a method of gaining respondent validation (Mays & Pope 2000). This gained a degree of assurance that the participants' meaning was represented in the theory while also identifying aspects that did not fit. Ultimately, this benefits theory development. For example, the participants did not share the same meaning of willingness as presented in the emergent theory, therefore this concept was explored further and subsequently

changed (Chapter Six, Findings). This strategy enabled the refinement and development of the emerging theoretical structure. The clear reporting of these and other changes made to the interviewing and observation approaches in the current study (Chapter Eleven), provides evidence of correct application of grounded theory methods in a study design that is responsive to participants (Cooney 2011), thus enhancing credibility.

The next chapter synthesises the current study, presenting its limitations, implications, contributions to the literature and the Theory of Creative Ability, and suggests areas for future research.

Chapter Eleven

Contributions and recommendations of the study

11.1 Introduction

This final chapter outlines the contribution of this study to existing literature on effort, and implications of the findings. This is followed by a reflection on the research limitations and research process, as a contribution to literature on grounded theory research. The chapter is drawn to a close with recommendations for future research.

11.2 Theoretical contribution

The current study revealed that in the study of effort from discrete biological, cognitive and behavioural perspectives, there is a lack of a theoretical conceptualisation of effort in human beings as an integrated whole. In particular, to date, no known study has tackled the lived experience of effort in everyday activity participation in natural settings. In addressing this gap in knowledge, the current study adds considerable insight to the effort literature.

The current study has drawn on the experiences of a broad range of people in terms of ages, culture, roles and activity participation in two very different countries. This is the first study of effort in activity participation from the perspectives of both observers of effort, and those directly experiencing effort in the doing of a broad range of activities in diverse contexts. In addition to studying behaviours in natural settings, studying subjective experiences of effort highlights the contribution and usefulness of qualitative research, to reveal a level of understanding not accessible from quantitative data of existing research.

Chapters Six (Findings), Seven (Literature review) and Eight (Discussion) revealed the complexity of the effort construct, understandable only in the dynamic between person, activity and environment. This thesis has presented new empirical evidence and discussion that asserts that the dominant cognitive-energetic conceptualisation of resources and effort does not adequately describe and explain these constructs. The behavioural perspective of effort as intensity of

motivation is also limited by these conceptualisations. The current study brings a perspective of effort that integrates the energetic, cognitive and behavioural dimensions of effort, discovering effort to be a multi-dimensional construct influenced by a complex interplay of factors both within and external to the individual.

The findings of the current study were constantly compared with the literature on effort, enabling exploration of fresh understandings of effort that emerged from the current study. Conceptual comparison with other studies and theoretical works, extended the conceptualisation of effort in the grounded theory. This led to developing a model of the formal Theory of Effort for Relating, for understanding effort (Chapter Nine).

There are numerous themes, concepts and processes that are congruent with other areas of research and theoretical works, indicating generality. These include: the influence on effort of awareness or attention, demands, attitude, beliefs, values, interest, intrinsic motivation, the weighing-up process; the effort-fatigue relationship; and variability in amount of effort. This study strengthens previously made theoretical assumptions about their relation to effort. By directly studying effort in grounded theory field research, the study also contributes new perspectives on, and explanation of these relations. The study has also contributed to a greater understanding of effort exertion vs energy expenditure, the sense of effort, its quality and quantity dimensions, the phenomenology of effort, its observable referents, and what constitutes demands on effort. Consequently, after achieving the study's aim to discover the theoretical construction of effort and maximum effort in relation to activity participation, about which there has been no prior empirical qualitative research in natural settings, this thesis has filled a gap in the literature and offers a significant contribution to existing knowledge of effort.

Specifically, a key issue for scientific disciplines concerned with the effort construct has been that effort has evaded definition due to the scientific community not having adequate knowledge of what it is. Subsequently, measuring effort has been problematic. The lack of effort definition also meant that the Theory of Creative Ability that informs the Vona du Toit Model of Creative Ability was incomplete. This means that there can be no agreement on the meaning of effort (intersubjectivity), affecting sense of understanding, ability to measure effort, and test the Theory of Creative Ability. The findings of the current study contribute to resolving this issue by providing definitions and explanations of effort and maximum effort. Du Toit's (1973, 1974a) presentation of the Theory of Creative Ability, was at what Lewin (1947) described as the first period of theory development i.e., the speculative stage. It can be argued that clinicians have applied the theory in

practice, through the Model of Creative Ability without investigating and testing the theory through research. This would have been the second period of theory development (Lewin 1947). The current empirical study has addressed this issue by gathering information on "what is really happening" (Reed 1984, p. 5), with the potential for the findings to lead the Theory of Creative Ability into the third period of theory development. That is, the constructive period when theory is revised and developed out of theory generation, rather than being based on speculation (Lewin 1947). This could equate to a major contribution to the Theory of Creative Ability, if accepted by the occupational therapy community concerned.

The current study makes a theoretical contribution to the knowledge base of the occupational therapy profession. The existing occupational therapy literature highlights that whilst occupational therapists understand that it is important for activity participation to be motivating and at the 'just right challenge', there is little understanding of the important role that effort plays in this.

The current study has established that people have an inherent need for effort - it is a fundamental criterion of the self, and centrally important to satisfying activity participation. This firmly situates theory of effort within the domain of occupational therapy. For its own knowledge base, the occupational therapy profession needs concepts that explain occupational beings and how occupational therapy works as an applied profession to facilitate the process of change (Reed 2005). This study makes this contribution by defining and explaining effort in its varying quantity and quality in relation to activity participation and its outcomes. Thus, this study makes a significant theoretical contribution to occupational therapy theory.

11.3 Implications of the findings

Effort, as discovered by the current study, suggests that the descriptors used in quantitative measures of perceived effort need to be reconsidered to better reflect how effort is subjectively experienced.

As expression of motivation influenced by ability, it can be argued that the effort construct is as important to occupational performance and occupational identity, as motivation. There is a need for occupational therapists to become aware of the central importance of effort to understanding occupational beings, the process of change, and how effort can be elicited and facilitated for therapeutic purposes. The absence of the effort construct from occupational therapy theory and literature needs to be addressed, in order to stimulate further research and theory generation.

The occupational therapy literature in the meta-synthesis (Chapter Seven), illustrates that occupational therapists are challenged by poor engagement in therapy. Consideration of the conditions for effort, including the weighing-up process, could help therapists to positively influence patients' ability to make a decision to actively engage in activity, and to put in effort.

This study's definition and description of comfort zone, minimal and maximum effort, and signs of effortful activity participation could support therapists in making evaluations of effort. Although one cannot accurately judge quantity and quality of effort based solely on nonverbal signs of effort, the finding that there are observable referents of effort could help therapists to evaluate effort. Although this study suggests that it may be problematic to differentiate between activity participation that is effortful and that done with maximum effort based on observations alone, minimal effort is more obvious. Therapists need to be alert to signs of minimal effort, as this is likely to indicate that activity participation is not at the just right challenge needed for optimal occupational performance, and therefore, may lack therapeutic benefit.

The underlying reasons for occupational therapy treatment have to be clearly understood based on thorough theoretical understanding, particularly as occupational therapists need practice theory predictions of change. If effort is needed from patients in order to bring about desired change, clearly occupational therapists need to gain full understanding of effort, its signs, mechanism and function. I propose that by having a clear framework for understanding effort for relatedness, occupational therapists could intervene more effectively.

Occupational therapists who undertake work capacity assessments, have a particular concern regarding minimal effort. Baptiste et al. (2005) called for a theoretical basis of effort in order to guide practice, and this study has responded to that need. The nonverbal signs of effort identified by this study, could guide therapists' observational assessments. Equally, the description and explanation of effort that this study provides, informed by the phenomenology of effort, could better enable therapists to discuss effort with the individuals they assess, as an essential part of evaluating effort (Strong et al 2004a). This study found that accurate judgments of effort rely on the evaluator knowing the person's capabilities in relation to activity participation demands. This requires skills in performance analysis and activity analysis, which are a unique set of core skills of the occupational therapy profession. Therefore, occupational therapists are uniquely positioned to assess effort, and the profession could situate itself as an essential discipline that makes a unique contribution to effort assessment.

In terms of other occupational therapy assessments, the effort construct is an item of assessment in the Assessment of Motor and Process Skills (AMPS) (Fisher 2010), the Creative Participation Assessment (van der Reyden, 2005, 2014) and the Activity Participation Outcome Measure (APOM) (Casteleijn 2010). However, effort is not defined in these measures, which potentially results in ambiguity about its meaning, and its measurement to be operationally inadequate. The lack of definitions needs to be reconsidered in light of this study's definitions of effort in varying quantity and quality. Given the propensity of the occupational therapy profession to give differing meanings to common terms (Creek 2010), it will be important that effort definitions are agreed upon. This will require entering into a dialogue, through which communities concentrate meanings and reach understanding about itself (Douglas 2004). Agreeing definitions is important to achieve intersubjectivity and prevent confusion with other disciplines and laypeople.

The finding that effort can be a negative feeling caused by dissatisfying activity participation, or occupational deprivation, needs to be considered in terms of understanding the relation between activity participation and well-being. The negative effects of occupational deprivation and boredom have begun to be documented in the occupational therapy literature. However, the draining effect of these experiences is not well understood in effort terms. Many patient participants in the study were made weary by their day-to-day experiences of the healthcare environment and interactions. This needs to be better understood in effort terms, if occupational therapists and other disciplines are to reduce the propensity for patients to decline engaging in therapy. That is, it could be that patients are already fatigued by dissatisfying experiences, potentially making it difficult for them to decide to engage in therapy when offered. Similarly, the fact that awareness, arousal and attention are crucial to effort, also needs to be better understood. In my experience, it is not unusual in mental health practice, for patients' short engagement in activity to be explained as poor motivation. However, it may be that the individual is either unable to focus attention, or has a short span of attention, lacks awareness, or lacks arousal. Although the relation is not made explicit, fleeting focus of attention is aligned with limited effort in the Theory of Creative Ability. The relation between attention, effort and motivation needs to be brought more clearly into the awareness of occupational therapists. Furthermore, effort needs to be recognised as a key component of occupational performance.

11.4 Limitations

The findings of the study are limited by the fact that the sample only consisted of adults with fair-good functional ability i.e., those able to give informed consent. Subsequently, effort in a broader range of human performance and experience has not been studied. Minimal effort, and effort as a negative feeling during dissatisfying activity participation could also have been explored more fully.

The findings of the study are also restricted in that interviews were only conducted in English, which precluded getting the insider perspective of people who speak a language other than English. The sample limitations therefore indicate that the formal grounded theory of effort is permeable to change in respect of different views from potential future participants.

The amount and quality of data for analysis was affected by problems arising in the research process, from which I gained valuable learning. First, interviews with patients were occasionally shortened because they had to return to the ward, or as in the case of a small number of patients, they were not able to fully participate because they were fatigued, or did not have adequate English skills to effectively engage in interviews. This issue was discussed in Chapter Five (Ethics). Shortening interviews limited data collection with some participants, therefore the phenomena under study may not have been explored to as much as depth as may have been ideal. What is important in grounded theory research is that there is adequate data for identifying patterns of behaviour across a sample. The large sample and volume of data collected meant that these incidents had a limited impact on this process, but were nevertheless a limitation of the study.

Regarding observations, the intention was to observe mental healthcare patients on the ward during the 30 minutes leading up to the occupational therapy sessions in order to observe the process of making a decision to attend, which may relate to decisions about, and antecedents to effort. However, this was impractical and unachievable due to patients being spread out over geographically distant wards. Additionally, most wards were chaotic and difficult to access. Therefore, as an alternative to making observations, I interviewed patients about the daily ward environments and their reasons for participating in the occupational therapy activities. In response, participants provided in-depth accounts that were rich in description. Nevertheless, it would have been preferable to see and experience the ward context for myself, because I may have observed patterns in the characteristics of the ward environment and its social processes, which participants may not have observed themselves or thought important to report.

The learning gained from these experiences is the importance of investing a generous amount of time to becoming familiar with hospital settings in order to understand the context, systems and processes. Greater time was needed to prepare the therapists and the ward staff for research. The latter could have been better prepared if I had used posters to clearly communicate about the study and met with them to discuss how they could support it. This would have been a difficult task, but nevertheless, would have been worth undertaking. It is also important to allocate sufficient time to the recruitment process in a country where English is not the first language of potential participants.

Finally, this was a highly complex study to undertake not least because it is a study of a complex, multi-dimensional construct. The development of a formal grounded theory is limited to the availability of literature and comparisons (Glaser 2007). In the current study, literature was extremely fragmented and there were no other comparable studies. Available comparisons in the literature, together with the time and resources of the researcher, are involved in deciding on "unending completeness" of a formal grounded theory, as opposed to the "tidy theoretical completeness" of substantive grounded theory (Glaser 2007, p. p79). This is not a limitation of the study, but it is important to recognise that there are inevitable limitations to newly generated theory.

11.5 Recommendations for research

Effort is a complex phenomenon, about which relatively little is known. Furthermore, the current study is the first known qualitative grounded theory study of effort therefore, all of the findings warrant further research. This can be acknowledged, not least because the Theory of Effort for Relating can be identified as a middle range theory, which as described by Merton (1967) involves the specification of ignorance. That is, middle range theorists recognise that there is an absence of knowledge, and there is more to be learned (Blegen & Tripp-Reimer 1997).
I have restricted my suggestions for avenues of research to those that I consider to be key priorities for the occupational therapy profession.

This study found that effort, feeling drained psychologically and also feeling fatigue are closely related. Hockey (2011, 2013) maintains that fatigue has evaded definition and lacks a mature theory to explain it, limited unnecessarily to energetic explanations. Given that effort and fatigue are inter-related, it would be beneficial to conduct further qualitative research that explores and clarifies this relationship, and develop conceptual clarity.

The formal Theory of Effort for Relating was developed with a future vision of its usefulness for understanding occupational performance and change, ultimately to enhance effective occupational therapy intervention and outcome measurement. The Theory of Effort for Relating can be seen as a middle-range theory that informs practice. From an occupational therapy perspective, future research could investigate the proposition that effortful activity participation can bring about change in functional ability, or occupational performance. This would focus occupational therapy research on the profession's core skills of performance analysis, activity analysis and grading informed by the individual's subjective experience of activity participation. To establish a positive correlation between graded activity participation, effort and positive functional ability, health and well-being outcomes would provide evidence of the value of the occupational therapy profession to health and social care. To achieve this necessitates using valid and reliable measures of effort in activity participation. Research that develops observational measurement tools and measures of the subjective experience of effort, is crucial for the occupational therapy profession.

Observation is a key method for assessing motivation and occupational performance by occupational therapists. It is important to further investigate what constitutes behavioural signs of effort in varying quantity and quality, to assist with making evaluations of motivation and effort. The literature indicates that occupational therapists and other disciplines have noted a correlation between certain behaviours, motivation and minimal to maximum effort. However, the nonverbal signs of effort significantly lack research (de Morree & Marcora 2010). Arguably, without further research into the observable referents of effort, it will not be possible to develop effort measures for occupational therapists. In order to measure effort, independent and dependent variables need to be operationally defined, requiring precise description of behaviours being measured (Uys 2003). The current study's use of observation and interviews is suggestive of methods that could be useful for future research into observable referents of effort.

This thesis illustrates the important contribution of research into the phenomenology of effort, to understanding effort. The subjective experience of effort also needs more research, also for development of subjective measures. The subjective views of minimal effort need exploration. Also, the experience of effort in particular groups of people including people including children and adolescents, would make a valuable contribution to understanding effort in breadth and depth. How effort is demonstrated in people with severe functional impairments and who lack mental capacity, also needs research. The target consumer of this research is primarily occupational therapists, for whom people with severe functional impairments constitute a large

percentage of the people they serve. Occupational therapists with experience of working with this population took part in the study, but their perceptions, particularly of signs of effort, may not be the same the carers or family of people with severely limited abilities. This needs investigation.

Finally, regarding definitions of effort, the ideal is that definitions are stated with such clarity that anyone can categorise phenomena in a way similar to the person who originally defined it (Reynolds 1971). Although a precise definition of effort may not be possible due to its multiple dimensions, defining effort can only occur as a result of further research that is focused on theory generation. In the opening chapter to this thesis, I agreed with Kaplan (1979), that "proper concepts are needed to formulate a good theory, but we need a good theory to arrive at the proper concepts…. the better our concepts, the better the theory we can formulate with them and in turn the better the concepts available for the next, improved theory" (p. 54). I encourage researchers to focus their efforts on qualitative research for theory generation towards extending conceptualisations and theoretical constructions of effort.

11.6 Reflection on doing grounded theory

The classic grounded theory approach and methods that I employed were faithful to Grounded Theory Methodology, although I cannot claim to have completely understood grounded theory at the outset. This was not aided by the fact that formal grounded theories are rare. Furthermore, researchers' undertaking of substantive and formal grounded theories demonstrates a range of differing interpretation and application of Grounded Theory Methodology. Notably, the majority of grounded theory studies that I reviewed, conducted the literature review at the start of the research process, and without discussion of the implications. Although a strength of Grounded Theory Methodology is that it offers researchers flexibility and creativity, without clear explication of research process and procedures, grounded theory research can be difficult to fathom.
In the current study, the research process from recruitment to writing up, served as a process for learning grounded theory. In particular, I gained learning regarding 1) the contribution of the literature and writing-up process to theory development; 2) the importance of being flexible regarding the use of observation and interviews; 3) skills required for field research, and 4) the importance of being prepared for the emotional impact of field research, particularly when researching vulnerable people . These are discussed below.

11.6.1 The contribution of the literature and writing-up process to theory development

As per the recommendations in grounded theory research, I did not refer to the literature on emerging concepts until a substantive theory was sufficiently grounded (Glaser & Strauss 1967; Glaser 1978). However, I initially overly immersed myself in the literature, moving from literature on one concept to another without being consistent with constant comparison. This resulted in me becoming rather confused and feeling that I had lost sight of how concepts had emerged. I subsequently returned to the raw data and re-tracked the trail to literature, constantly comparing it to the data. This experience enabled me to properly understand the importance of the constant comparison method for grounding concepts and categories, rather than being drawn into a preconceived conceptual framework (Glaser & Strauss 1967). It was essential to delay the literature review on effort until the findings had been written-up. The process of writing clarified concepts and their relations, and enabled me to feel confident in the theory that had been discovered. In following this with the literature review, it was exciting to realise how much of the emergent theory was supported by other studies and theoretical works, whilst it was also firmly grounded and discovered from empirical research. I am certain that if a review of the effort literature had been undertaken at the start of the research process, it would have contaminated the process of conceptualisation and prevented true discovery. Furthermore, allowing the grounded theory to develop during the process of writing-up, enabled me to fully understand the assertions made at the beginning of this thesis, that Grounded Theory Methodology provides a total methodological package from data collection to the writing-up process (Glaser 1998).

11.6.2 Flexibility of observation and interview approaches

In the grounded theory literature, there is consensus regarding not adopting too rigid a stance on the type of observation method used (Gold 1969; Murphy et al.1998), but that processes for collecting data should be flexible in response to decisions made over the course of the study whilst in the field (Jorgensen 1989; Wallace 2005). Schatzman and Strauss (1973) suggested that it is usual for researchers to make tactical decisions and change roles during a study, governed by the researcher's answers to questions such as "Am I getting what I need? Am I and are my hosts comfortable, and acting naturally?" (p. 63).

For field research I decided to undertake both interviewing and participant observation. Jorgensen (1989) suggested that participant observation is valuable when there may be differing views between insiders and outsiders of a group. I anticipated that effort and maximum effort may be experienced and/or conceptualised differently by performers of effort (patients and

public), and observers of effort (therapists). Therefore, from Gold's (1958) fourfold typology of observation roles I initially selected the participant as observer role in anticipation that by participating in occupational therapy sessions alongside patients and therapists, I might discover differing views and experiences of effort. By participating in some of the more informal group occupational therapy activity sessions, I thought I might gain insight into the nature of the activity participation, talk with patients about what they were finding effortful and discover what was 'going on' in that setting. But, on entering the therapy context, participation did not seem to be the right approach for several reasons. Firstly, I felt that my participation as a researcher altered the setting from a natural to an unnatural one, which was at odds with naturalistic inquiry for observing people "in their natural settings and contexts, with as little intrusion (or control) as possible emanating from the observer" (Wallace 2005, p. 74). I perceived that being a participant as observer in this therapy context would impact on the behaviours of participants and interfere with the effective provision of therapy, potentially with detrimental effect on patients and therapists. Therefore, I considered the participant as observer role with full participation was unethical. An additional concern was that many of the therapy sessions were delivered in groups of up to 25 patients. In these situations it seemed unlikely that I could participate without compromising my ability to observe. In this respect, there was tension between wanting to participate in order to better know what was being observed and the need for distance in order to observe and document observations.

In the grounded theory literature there is consensus regarding not adopting too rigid a stance on the type of observation method used (Murphy et al. 1998; Seed 1995), but that decisions about observation should be made in the field based on the needs of the research whilst mindful of the advantages and disadvantages associated with the stances adopted. For all of the aforementioned reasons, in the first observation incident I changed my role to non-participant observation, also known a complete observer role (Murphy et al. 1998; Atkinson & Hammersley 1994), as described in Chapter Three. I kept this role for all observations.

It was intended that I would make video recordings of patients during group activities, but after the first recording I decided against this method as discussed in Chapter Three (Stage One Methods) and Chapter Five (Ethics). This decision however, was based only on a single experience of recording observations rather than on evaluation of the original rationale for using video recordings. I later realised that video recording would have been a valuable method to aid discussion with occupational therapists about signs of effort in patients' activity participation. I

have learned not to be hasty in making changes to research methods that have been well considered during the planning of a study.

11.6.3 Skills for field research

As a neophyte grounded theory researcher, the experience and skills that I possessed for undertaking field research had an impact on data collection. Because observation is a core skill of occupational therapists in clinical practice, I was confident that I could effectively make observations in the field. On entering the field however, I was struck by a realisation that I did not know what to look at exactly. That is, participants' actions and interactions appeared unremarkable. Furthermore, it was difficult within group occupational therapy sessions to focus on what was happening because the session was full of *social noise* (Sanger 1996) i.e., the information rich environment was a whirring, buzzing confusion (Wallace 2005). In this situation, as Wallace (2005) predicts, it was difficult to feel competent to extract some coherent meanings from this field for later use. I grappled with identifying what was significant data to record as this seemed purely to be what I had noticed. I could relate to Sanger's (1996) suggestion that "what we place in the foreground is what we want to observe, then it follows that what we find in our foreground is what we deem to be significant" (p. 6).

As both the field and the process of making field notes became more familiar, I became more receptive to what was happening outside of foreground awareness. As Sanger (1996) put it, I became less selective of data and could more naively engage with the milieu under study. Achieving this state of mind was influenced by becoming more at ease with the observer role (Sanger 1996). This was supported by my clinical experience, because I realised that as Mulhall (2003) suggests, clinical observation is not much different in form and structure to research observation. Nevertheless, the challenge of this field research was to make sense of constantly changing contexts and social processes. To this end, the additional method of interviewing contributed to my being able to effectively make use of observations, because I realised that the relevance of what I observed would become clearer in the interviews. Thus, interviewing proved a vital data collection method that supported the development of a more focussed approach to observation as the study progressed.

With regards to interviewing, in grounded theory research it is recommended that interviews open with a *grand tour*, broad open-ended question related to the general topic (Simmons 2010), after which questions are guided by what emerges from the data to be relevant (Glaser 2001). I therefore had not intended to use semi-structured interviewing, or use the interview schedule

that had to be submitted as part of the ethics application. However, I discovered very quickly that a grand tour question was inadequate for discovering patients' experiences and meanings of effort because as an abstract concept, they initially found effort difficult to explain and put into words. Therefore, in the initial interviews I used semi-structured interviewing to enable participants to engage with the general topic.

The need to change the questions supports Charmaz's (2006) assertion that the "wrong questions fail to explore pivotal issues" (p. 32). To ask pre-conceived questions may be viewed as forcing the data (Glaser 1992), but enquiring about the meaning of effort is still a broad open-ended question related to the general topic area, which encouraged participants to respond in the way that they wished. Therefore, I was satisfied that data was not being forced but generated. From an ethical perspective, being flexible in the interviewing approach was also responsive to participants' abilities, whilst protecting their dignity, preventing distress or discomfort from not being able to engage adequately in the interviews, and respecting their autonomy.

11.6.4 Being prepared for the emotional impact of field research

In undertaking this study, I learned great deal about the importance of being prepared for qualitative research potentially being an intense experience, and the emotion evoked by being privy to participants from abilities through close involvement in field research (Friedman 1991). In the current study, I found mental health patients in South Africa to be vulnerable for several reasons: being compromised by mental health problems; being a mental health patient in a large mental healthcare institution; being cared for under the medical model which promotes the ideal of compliance in patients (Carpenter & Suto 2008), whilst also being located in South Africa, which has a history of black powerlessness under white authority.

For grounded theory researchers, Punch (1994) asserts that the uncertainty inherent in prolonged field research that uses observation and interviews makes researchers unavoidably vulnerable, and that neophyte researchers are at risk of experiencing personal traumas if they are not adequately prepared for using observation. As an occupational therapist whose main assessment methods has been interviewing and observation of mental health clients in hospitals, I had not anticipated that the field research would be intense and emotional for me. Prior to entering the field, my focus had been on processes aimed at taking care of participants rather than considering the vulnerability of my own position in the research. In response to the ethics committee application form question regarding my qualifications for undertaking the study, I stated my experience from clinical practice and Masters study interviewing. During the study, I subsequently

discovered that this experience was not sufficient. I lacked experience in grounded theory research, and as a neophyte grounded theory researcher, my experience did not prepare me for managing the emotionality of field research.

On completing the field research, I questioned what being qualified means, as my experience indicated that certain qualifications do not necessarily mean that the researcher is adequately skilled or prepared for the emotion of the research experience. In the ethics application there was nothing to prompt me to consider whether *I* might come to harm as a researcher. In the research context, harm is generally defined as adverse psychological or physical consequences of participation (Cook & Skinner 1995). For example, in considering the risks to participants of taking part in interviews, researchers recognise that they might experience distressing emotions. Subsequently, in ethics applications researchers commonly state a plan to use strategies to minimise harm, such as, offering a debrief session at the end of interviews. A question that is equally as important to ask is what is the risk to the researcher of participating in the research?

A common assumption is that work is undertaken within the researcher-supervisor meeting to prepare the researcher for undertaking research (Lee-Trewick & Linkogle 2000). However, it is not obvious that this necessitates talking about the emotion of the research experience. Wincup (2001) asserts that in the research arena, "emotionality is still constructed in opposition to rationality and professionalism, and the importance of emotions is denied" (p. 19). Consequently, many academics are uncomfortable with talking about the personal impact of research and avoid this issue, leaving the novice researcher unprepared for the degree of emotional engagement required by social research (Wincup 2001). It is likely that neither I, nor my supervisors considered the emotional aspect of the study, because I was not setting out to research an emotionally laden topic. I had not anticipated that intense suffering or social injustices would be aspects of my research experience, but this unexpectedly became the reality. The unexpectedness intensified the experience of not merely hearing about patients' suffering during interviews, but witnessing it and spending time in the midst of their experiences. Bringing the emotional lives of participants to the fore, albeit unintentionally, was a powerful researcher experience (deMarrais & Tisdale 2005), and as Punch (1994) warned, undertaking observation in this context made me a vulnerable observer.

I was completely unprepared for the impact that collecting data at the mental healthcare hospitals in South Africa would have on me emotionally. The patients' environments were stark and deprived compared to the modern, well-resourced facilities in the UK. Several previous visits to

mental health hospitals in South Africa had made me aware of this, but seeing the environment during fleeting visits, is far removed from experiencing them in the close proximity of field of research over an extended period of time. As I came to know the participants, I gained insight into them as individuals - their lives, histories and desired futures. On many occasions I was saddened by the circumstances of their lives as they described in interviews, made more powerful by observing their lives in the context. Spending time daily on the wards gave witness to the impact of deprivation, their frustration and some participants' sense of helplessness and loneliness. Many participants demonstrated tremendous resilience and courage, and despite their circumstances, gave generously to the study. Such experiences can lead to researchers experiencing a variety of emotions (deMarrais 2004), yet textbook advice to researchers is to maintain empathic detachment (Campbell 2002). On reflection, this is what I did, perhaps partly because there had not been pre-study discussion, or planning of strategies for managing the emotionality of field research.

On completion of the data collection, I provided a picnic for the main participants to thank them for their contributions. The food and soft drinks were a major luxury for them. One participant stated that by including them in the research and providing a picnic, I had made them feel very important in a short space of time. Considering how short lived my contribution to them would be, compared with their contribution to my study and ultimately to my career, I privately felt unworthy of the gratitude. Participants came from, and would be discharged to poor socio economic circumstances, about which there appeared to be little if anything they could do to significantly improve them. During the study, they were residing in a context that was disempowering due to lack of resources and a predominantly paternalistic approach to healthcare. In contrast, I was extraordinarily privileged and in a powerful position as a white, educated healthcare professional and researcher. I felt saddened at leaving them in the circumstances in which they lived.

On returning to the UK, the emotional reaction that gradually surfaced, was a shock. What came to the fore was an overwhelming sense of guilt. I ruminated over whether I had asserted power, albeit benevolently, over those with less power and privilege in the interest of my research. I found this an extraordinarily uncomfortable notion to deliberate. These thoughts were punctured by recollection of the warm gratitude that participants bestowed on me at the picnic, which seemed completely undeserved considering the selfishness of my interest in their participation. Glesne (2011) suggest that it is not unusual for the researcher to feel guilt for gaining from participants' contributions, and a sense of exploitation may also arise (Merrell & Williams 1994;

Glesne 2011). In the absence of any pre-study discussion about managing the emotion of research, I thought my feelings were unique, which is a common perception of novice researchers (deMarrais 1998). Although I intended to discuss my feelings within supervision, this was problematic. As Lee-Trewick and Linkogle (2000) recognise, it is not an easy task within supervision to say *"I feel guilty"*, particularly when the emotionality of research is not on the agenda. I had not realised that in observation research research-participant encounters and the emotions evoked are as fundamental to the researcher as discussions on observation techniques, data analysis and report writing (Punch 1994, p. 84). At this juncture it might have been easy to immerse myself in intellectualising the experience, which can be a useful mechanism to avoid painful feelings (Campbell 2002). Rather, I engaged in reflexivity for the purpose of examining how my social identity and background may have impacted on the research (Robson 2002; Le Gallais 2008), and to examine the ethics of the study. I also used the literature to explore both emotionality and the issue of power in research.

Karnieli-Miller et al. (2011) assert that the researcher has a direct influence over the distribution of power in the researcher-participant relationship and how the relationship is defined. As discussed in Chapter Five (Ethics), I ensured to the best of my ability that participants had a sense of control and influence over the research process. Nevertheless, I reflected on whether the power associated with my status of a white, educated, healthcare professional and researcher, made the predominantly black patients feel powerless and unable to question the study or decline to take part. The difficulty in ensuring true voluntary participation in the hospital environment has been recognised, particularly when the researcher is a healthcare professional, as patients may feel subject to external pressures such as a sense of duty (Richards & Schwartz 2002). LaRossa et al. (1981) note that there are structural similarities between the therapist-patient and researcher-participant relationships, both containing a power differential with respect to participant compliance and relative powerlessness. The power distribution in the research relationship is suggested by the titles assigned to the roles, ranging from the egalitarian relationship of co-researchers to highly hierarchical informant vs. collaborator relationships (Karnieli-Miller et al. 2011).

Karnieli-Miller et al. (2011) suggest that the researcher-participant terms adopted for the current study, suggests a highly hierarchical relationship. Although I had not intentionally sought this, there is inherent power distribution in the Classic grounded theory researcher-participant roles. That is, this approach differs to that taken by Constructivist grounded theorists who see data and analysis as created from shared experiences and relationships with participants (Ghezeljeh &

Emami 2009). Subsequently, interviews provide the site for active interactions between participant and researcher, leading to results that are mutually negotiated (Ghezeljeh & Emami 2009). In contrast, a Glaserian, classic grounded theory perspective is that the researcher investigates the social world of the participant. Much like a detective, the researcher uncovers and names latent patterns that participants may not realise from their behaviours (Glaser 1998, Glaser 2002a, Glaser 2002b). Thus, the titles of researcher-participant that label the roles and relationship between the researcher and the researched, reflect the epistemological stance of Classic grounded theory and the power relation inherent within it.

On reflection, the selection of the classic grounded theory approach may have influenced my lack of consideration of emotion in the research. The lack of attention to feelings is apparent in the work of Mead and Blumer, two influential figures on Glaser during the founding of grounded theory at the Chicago school (Young & Lee 1996). Hochschild (1979) suggests "the focus of Mead and Blumer on unconscious, active and responsive gestures might have been most fruitful had not their focus on deeds and thoughts almost entirely obscured the importance of feelings" (p. 555). The lack of concern for emotion was transmitted into the methodological writings associated with the neo-Chicagoan tradition, which makes explicit the role of emotions in fieldwork (Young & Lee 1996).

As one of the founders of grounded theory, Glaser rejects the constructivist view that the researcher's thoughts and feelings contribute to the researcher-participant co-construction of meaning and theory. Rather, from a positivist position Glaser (2002b) asserts that researcher enters the field as a neutral observer in order to discover theory in an objective way. Hochschild (1979) asserts that methodological approaches such as this, dictate how the researcher should manage emotions during data collection, known as the feeling rules of research. In classic grounded theory there is no indication that the researcher's feelings have any significance in the research process. This might have made me more vulnerable as a researcher and encouraged me to suppress emotional reactions in order to, as Hochschild (1979) put it, get the job done.

Engaging in reflexivity was essential to gaining breadth of knowledge and understanding about the complexities of undertaking grounded theory field research with vulnerable people; understanding the importance of acknowledging and preparing for the emotionality of research, and how ethical integrity is crucially central to me personally and professionally. I learned that an important trait in qualitative researchers is willingness and ability to tolerate strong emotions, and when emotion is viewed as a source of strength it can be explored for intellectual lessons (Friedman 1991).

A tangible outcome of this process was a valuable written reflective piece on power and emotionality in research and a thorough evaluation of the rigour of the study through reflexivity. I was satisfied that the study has ethical integrity (Chapter Five, Ethics).

The obvious learning that I gained from this experience is that field research, particularly when researching vulnerable people can be an intense and emotional experience for which it is important to be prepared. The emotionality of research may not be something that research supervisors are familiar with, therefore it is a topic that I shall bring to future supervision and urge all supervisors to do so. I have learnt about a range of strategies for managing emotion that I will take forward into my research career. In order to raise awareness of the potential emotional impact of research on researchers, there is a need to share experiences and learning through publication, and I intend to do this. Publishing may also bring the importance of protecting the researcher from harm to the attention of ethics committees.
I also feel strongly that I have a responsibility through publication to raise awareness of practices in hospitals that threaten patients' ability to participate in research on a truly voluntary basis.

11.7 Final conclusion

This research aimed to develop a theory of effort which would be plausible and acceptable for general use, but in particular for occupational therapists. Since the need for this investigation came from a lack of definition of effort in the Theory of Creative Ability, it was envisaged that the study will contribute to refining fundamental constructs in the theory. The outcome of the study has the potential to make a considerable contribution to the effort literature and occupational therapy knowledge, including to the Theory of Creative Ability. At the end of this long journey, all of the aims of the study and more have been achieved. It has been a challenging endeavour that has required maximum effort in many respects. On a personal level, the result of maximum effort has been the furthering of myself academically, personally, professionally and as a researcher.

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Appendices

Appendix A

Appendix A Sample sites as the field of study

Site	Context	Activity Participation
Site A mental health service, South Africa	Occupational therapy department therapy room 1	Poster session Island session Craft activities Cognitive games
	Occupational therapy department therapy room 2	Assessment activity: game Assessment activity: mosaic
	Ward garden	Gardening
	Ward communal area	Topix game
	Occupational therapy outpatient department therapy room 2	Rummicup game
	Ward exercise area	
	Hospital grounds	Football
Site B mental health service, South Africa	Occupational therapy department therapy room 1	Assessment bead activity Craft activities
	Field	Football
	Hospital grounds	
Site C physical service, South Africa	Occupational therapy outpatient department therapy room 2	RA treatment sessions Cones and washing session Various treatment activities
	Burns ward 1	Muscle stretching Dressing Table top game
	Burns intensive care room	Muscle stretching

Appendix B

Appendix B Participant Information Sheets for occupational therapists

University of the Witwatersrand human research ethics committee Informed Consent

PARTICIPANT INFORMATION AND INFORMED CONSENT (Occupational Therapists, South Africa)

STUDY TITLE: An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability

INVESTIGATOR: This leaflet is about research being undertaken by Wendy Sherwood who is interested in finding out what constitutes effort and maximum effort for activity participation as PhD research.

INSTITUTION: The University of the Witwatersrand, Johannesburg.

DAYTIME TELEPHONE NUMBER

AFTER HOURS TELEPHONE NUMBER(S):

Researcher's email address:

To the potential Participant: *This consent form may contain words that you do not understand. Please ask the researcher or the study staff to explain any words or information that you do not clearly understand. You may take home* ***an unsigned copy of this consent*** *form to think about or discuss with family or friends* ***before making your decision.***

INTRODUCTION:

Good day, my name is Wendy Sherwood, I am a lecturer in Occupational Therapy at London South Bank University in England and a PhD student at the University of the Witwatersrand, Johannesburg. I wish to invite you to consider participating in a research study, entitled "An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability".

Before agreeing to participate, it is important that you read and understand the following explanation of the purpose of the study, the study procedures, benefits and risks and your right to withdraw from the study at any time.

This information leaflet is to help you to decide if you would like to participate. You need to understand what is involved before you agree to take part in this study. If you have any questions, do not hesitate to ask me. You should not agree to take part unless you are satisfied about all the procedures involved.

If you decide to take part in this study, you will be asked to sign this document to confirm that you understand the study. You will be given a copy to keep.

PURPOSE OF THE STUDY:

I am a postgraduate research student registered at the University of the Witwatersrand, Johannesburg, South Africa. The aim of this study is to develop a theory of effort and maximum effort for activity participation. That is, conceptualise effort and explain its influence on a person's decision to do activity, participate in activity and the benefits of effort.

The study has two phases of data collection. Phase one involves the researcher observing patients and occupational therapists during routine occupational therapy sessions and interviewing patients and occupational therapists about experiences of activity participation. Phase two will involve focus groups of occupational therapists discussing the theory of effort developed from phase one. At this stage I am only inviting you to participate in phase one of the study.

I hope that the findings of the study will enhance the occupational therapy profession's understanding of the nature of activity participation and better enable therapists to understand how to enable people to do activity through understanding effort.

PHASE 1.

LENGTH OF THE STUDY AND NUMBER OF PARTICIPANTS:

This phase of the study will be undertaken in South Africa and also in the United Kingdom (UK). In South Africa this phase involves the researcher observing patients and occupational therapists during routine occupational therapy sessions. When further data are required, the sessions may be followed by interviews with patients and/or occupational therapists. In the UK, this phase involves interviewing occupational therapists only.

For this phase, a total of approximately 48 participants will take part in the study: 32 participants will be recruited in South Africa (16 occupational therapists and 16 patients) and 16 recruited in the UK (16 occupational therapists).

South Africa

In South Africa, approximately 8 occupational therapists will participate (four working in mental health services and four working in physical services) plus approximately 8 patients (four receiving occupational therapy in a mental health service and four receiving occupational therapy in a physical service).

Mental health services

There are two sites for data collection in mental health services:

Site 1: .....Hospital (mental health) (2 occupational therapists and 2 patients)

Site 2: ......(mental health) (2 occupational therapists and 2 patients)

Physical services

..... Hospital has a large number of wards and differing physical services, therefore this one hospital is a suitable site for data collection in respect of recruitment of occupational therapists and patients in physical services: (4 occupational therapists and 4 patients)

United Kingdom

Mental health services

Site 3: ..... NHS Foundation Trust (4 occupational therapists).

Site 4: ..... NHS Foundation Trust (4 occupational therapists).

Physical services

Site 5: ..... NHS Foundation Trust (8 occupational therapists).

The participants will be between the ages of 18 and 70. I shall be undertaking research for approximately 12 months, but your participation will be over several weeks. The total amount of time required for your participation in this study is approximated as a maximum of 4 hours a week for 6 weeks, and the majority of this time will be time spent in your routine occupational therapy sessions.

PHASE 1 PROCEDURES:

If you agree to take part in this phase of the study, I shall ask you to identify one or more patients that you consider to be suitable for the study. Permission to access patients will have been gained from the CEO of the hospital and/or your Occupational Therapy Service Manager. The gaining of Informed Consent from patients or legal next of kin/legal representatives will follow a procedure approved by the University of the Witwatersrand Human Research Ethics Committee. Once patients are recruited into the study, you and I will discuss and agree occupational therapy sessions during which I may observe you working with patients recruited as participants in the study. I may attend one or more sessions as an observer in order to understand what is happening during activity participation. If there is a good moment for me to ask a question or enter into conversation with either you or the patient, I may take that opportunity if it does not affect the therapy. The session may be videoed so that I can review the session afterwards. At some stage after the session, I may also ask for time to talk with you in a 45-60 minute interview about your experience of the session. This is so that I can find out more about your experience of the session in relation to your

own experience of effort and your perceptions of whether effort was evident in the patient. I want to audio record the interview if you are happy for me to do so. This is so that I can listen to the interview several times in order to fully understand what was discussed.

In the future, it may be necessary to do another similar study and compare the findings. Therefore, I am also asking you to give permission for me to use the information I gain from you, in similar future studies. You will not be identified in this or future studies – your name, personal details, name of the hospital will not be used in this or future studies. Please see the information on Confidentiality below.

WILL ANY OF THESE STUDY PROCEDURES RESULT IN DISCOMFORT OR INCONVENIENCE? I shall be attending routine occupational therapy sessions, therefore there should be no inconvenience to you. The interviews will be arranged for a time that suits you and will take place at the hospital.

RISKS OF PHASE 1 OF THE STUDY: There is the potential for participants to find talking about experiences and views anxiety provoking or uncomfortable. At the end of the interview you will be offered time to discuss any concerns or questions you may have about the interview. You have the right to end the interview at any time without telling me why.

BENEFITS:

The potential benefit from your participation in this study may be that occupational therapists are better able to provide effective therapy because they better understand effort for activity participation.

RIGHTS AS A PARTICIPANT IN THIS STUDY:

Your participation in this study is entirely voluntary and you can decline to participate, or stop at any time, without stating any reason. Your withdrawal will not affect your professional career in any way. Should you withdraw, any data collected from your direct participation i.e., observations of you, records of your interactions with patients and colleagues (including focus groups), and interviews with you will be removed from the study.

Withdrawal:

- Your withdrawal will not affect your professional career in any way.
- I retain the right to withdraw you from the study if it is considered to be in your best interest.
- If you did not follow the guidelines of the study and the regulations of the study facility, you may be withdrawn from the study at any time.

ETHICAL APPROVAL:

- This study protocol has been submitted to the University of the Witwatersrand, Human Research Ethics Committee (HREC) and the necessary Local Research Ethics Committees in the UK. Written approval has been granted by these committees.

26. SOURCE OF ADDITIONAL INFORMATION:

If you want any information regarding your **rights as a research participant, or complaints regarding this research study**, you may contact Prof. Cleaton-Jones, Chairperson of the University of the Witwatersrand, Human Research Ethics Committee (HREC), which is an independent committee established to help protect the rights of research participants at

For **research information** you can contact Wendy Sherwood:

CONFIDENTIALITY:

- All information obtained during the course of this study, including hospital records, personal data and research data will be kept strictly confidential.
- All information that could identify you as a participant will be removed from data collected and replaced by codes so that you cannot be identified. The codes will only be accessible by me as the researcher.
- All hard copy (paper-based) information will be securely stored in a locked filing cabinet accessible only by the researcher.
- All information that could identify you as a participant will be removed from data collected and replaced by codes so that you cannot be identified. The codes will only be accessible by me as the researcher.
- All written and recorded data will be stored in secured files.
- Audio and video recordings will only be watched and listened to for the purposes of this study and not for any other purposes.
- Audio and video recordings will only be listened to and watched by the researcher and will not be accessible by any other person(s).
- All the recordings will be password protected and as the sole researcher, only Wendy Sherwood will have access to the passwords and recordings
- Immediately after the recorded occupational therapy sessions and interviews the recordings will be saved onto a computer file and labeled with an identification code number, not your name, participants' names or the name of the hospital and the recordings will be permanently deleted from the recorders.
- Information will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- When interview recordings have been transcribed by the researcher (approximately 2 months after recordings are made), the recordings will be permanently deleted from the computer
- When analysis of the recordings is completed (approximately six months after recordings are taken), all video recordings stored on computer will be permanently deleted from the computer
- Recordings made in South Africa may be taken on a computer to the UK and securely stored as described above
- You may ask that the recorder be turned off at any point during the study if there is something that you do not want recorded
- Data that may be reported in scientific journals will not include any information that identifies you or the hospital site as participating in this study

- Written data will continue to be stored securely for inclusion in future studies undertaken by the researcher if required.
- Data that may be reported in scientific journals will not include any information that identifies you or the hospital site as participating in this study.

PARTICIPANT QUESTIONS*?:* Did the participant raise any questions?

YES / NO **If YES** – What where they:

INFORMED CONSENT (Occupational Therapists):

- I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled 'An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability'
- I have also received, read and understood the above written information (Participant Information Leaflet and Informed Consent [Occupational Therapists]) regarding the study.
- I am aware that video recordings may be made of my participation in the study
- I am aware that audio recordings may be made of my participation in the study
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials will be anonymously processed into a study report.
- I am aware that the information that I provide may be used in future studies.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

PARTICIPANT:

Printed Name	Signature	Date and Time

I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

WITNESS (If applicable)**:**

Printed Name	Signature	Date and Time

INFORMED CONSENT TO THE MAKING OF VIDEO RECORDINGS (OTs, South Africa):

- I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled 'An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability'
- I have received, read and understood the Participant Information Leaflet and Informed Consent [Occupational Therapists]) regarding the study.

- **I am aware that video recordings may be made of my participation in occupational therapy sessions. The recordings will be made on a recorder which is a small hand-sized object that will stand on a shelf or table for the duration of the therapy session.**

I am aware that:

- all data obtained during the course of this study will be kept strictly confidential as stated in the Informed Consent (Occupational Therapists) form.
- immediately after the therapy session the video recording will be saved onto a computer file and labeled with an identification code number, not my name, participants' names or the name of the hospital and the recording will be permanently deleted from the recorder.
- recordings will be stored securely on a personal computer requiring a password to access it; the computer files containing recordings will also be password protected. Passwords will only be known by the researcher who will have sole access to the computer and recordings
- recordings will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- recordings made in South Africa may be taken on a computer to the UK and securely stored as described above.
- recordings will only be used for the purposes of this study and not for any other purposes.
- video recordings will only be watched by the researcher and not by any other person(s).
- when analysis of the recordings is completed (approximately six months after recordings are taken), all video recordings stored on computer will be permanently deleted from the computer.
- I may, at any stage, without prejudice, withdraw my consent for video recordings to be made and/or withdraw my consent to participation in the study.
- I may ask that the recorder be turned off at any point during the study if there is something that I do not want recorded
- I have had sufficient opportunity to ask questions and (of my own free will) provide consent to have video recordings taken of my participation in this study.

PARTICIPANT:

Printed Name	Signature	Date and Time

I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

WITNESS (If applicable)**:**

Printed Name	Signature	Date and Time

Appendix C

Appendix C Participant information and informed consent (patients)

University of the Witwatersrand human research ethics committee Informed Consent

PARTICIPANT INFORMATION AND INFORMED CONSENT (Patients)

STUDY TITLE: An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability

INVESTIGATOR: This leaflet is about research being undertaken by Wendy Sherwood who is interested in finding out what it takes for a person to do activity. This 'finding out' is a piece of research for a PhD.

INSTITUTION: The University of the Witwatersrand, Johannesburg.

DAYTIME TELEPHONE NUMBER

AFTER HOURS TELEPHONE NUMBER(S):

Researcher's email address:

To the potential Participant: *This consent form may contain words that you do not understand. Please ask the researcher or the study staff to explain any words or information that you do not clearly understand. You may take home an unsigned copy of this consent form to think about or discuss with family or friends before making your decision.*

INTRODUCTION:

Good day, my name is Wendy Sherwood, I am a lecturer in Occupational Therapy at London South Bank University in England and a PhD student at the University of the Witwatersrand, Johannesburg. I wish to invite you to consider participating in a research study, entitled "An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability".

1. Before agreeing to participate, it is important that you read and understand the following explanation of the purpose of the study, the study procedures, benefits and risks and your right to withdraw from the study at any time.
   This information leaflet is to help you to decide if you would like to participate. You need to understand what is involved before you agree to take part in this study.
2. If you have any questions, do not hesitate to ask me.
3. You should not agree to take part unless you are satisfied about all the procedures involved.
4. Please be open with me regarding your health history, since you may otherwise harm yourself by participating in this study.
5. If you decide to take part in this study, you will be asked to sign this document to confirm that you understand the study. You will be given a copy to keep.
6. If you have a personal doctor, please discuss with or inform him/her of your possible participation in this study. If you wish, I can also notify your personal doctor in this regard.

PURPOSE OF THE STUDY:

- I am a postgraduate research student registered at the University of the Witwatersrand, Johannesburg, South Africa. The aim of this study is to describe what it takes for people to do activity. This investigation will start with observing occupational therapy sessions where the doing of activity occurs. I hope that the findings of the study will enable occupational therapists to better identify how to enable people to do activity.

LENGTH OF THE STUDY AND NUMBER OF PARTICIPANTS:

A total of approximately 48 participants will take part in the study: 32 participants will be recruited in South Africa (16 occupational therapists and 16 patients) and 16 recruited in the UK (16 occupational therapists).

In South Africa, approximately 16 occupational therapists will participate (eight working in mental health services and eight working in physical services) plus approximately 16 patients (one patient receiving occupational therapy from each therapist).
Two hospitals providing mental health services (names of hospitals) and one large hospital providing a broad range of physical services (name of hospital) are the sites for recruitment and participation in the study.

Hospital 1 (mental health service) (name of hospital): 4 occupational therapists and 4 patients.

Hospital 2 (mental health service) (name of hospital): 4 occupational therapists and 4 patients

Hospital 2 (physical illness services) (name of hospital): 8 occupational therapists and 8 patients.

A sample of 16 occupational therapists will be recruited in the UK.
Hospital 4 (mental health service) (name of hospital): 4 occupational therapists.

Hospital 5 (mental health service) (name of hospital): 4 occupational therapists
Hospital 6 (physical services) (name of hospital): 8 occupational therapists

The participants will be between the ages of 18 and 70. I shall be doing research for approximately 12 months, but your participation will be over a few weeks. The total amount of time required for your participation in this study will be a maximum of 4 hours a week for 6 weeks, and the majority of this time will be time spent in your routine occupational therapy sessions.

PROCEDURES:

If you agree to take part in this study, I will arrange a time with your occupational therapist for me to join you at one or more of your occupational therapy sessions. The therapy session will occur as usual and I shall be observing and listening in order to understand what is happening. If there is a good moment for me to ask a question or enter into conversation with either you or the therapist, I may take that opportunity if it does not affect the therapy. The session may be videoed so that I can review the session afterwards. At some stage after the session, I may also ask for time to talk with you in a 45-60 minute interview about your experience of the session. This is so that I can find out more about how you decided to do the activity and continue with the activity and what you gained

from doing it. I want to audio record the interview if you are happy for me to do so. This is so that I can listen to the interview several times in order to fully understand what was discussed.
In the future, it may be necessary to do another study like this one and compare what was found out in each study. Therefore, I am also asking you to give permission for me to use the information I gain from you, in similar future studies. You will not be identified in this or future studies – your name, personal details, name of the hospital will not be used in this or future studies. Please see the information on Confidentiality below.

WILL ANY OF THESE STUDY PROCEDURES RESULT IN DISCOMFORT OR INCONVENIENCE? I shall be attending routine occupational therapy sessions, therefore there should be no inconvenience to you. The interviews will be arranged for a time that suits you and will take place at the hospital.

RISKS OF THE STUDY There is the potential for participants to find talking about experiences and views anxiety provoking or uncomfortable. At the end of the interview you will be offered time to discuss any concerns or questions you may have about the interview. You have the right to end the interview at any time without telling me why.

BENEFITS:
The potential benefit from your participation in this study may be that occupational therapists are better able to provide effective therapy because they better understand what it takes to do activity.

RIGHTS AS A PARTICIPANT IN THIS STUDY:
Your participation in this study is entirely voluntary and you can decline to participate, or stop at any time, without stating any reason. Your withdrawal will not affect your access to other health / medical care.

Withdrawal:

- Your withdrawal will not affect your access to other medical care.
- I retain the right to withdraw you from the study if it is considered to be in your best interest.
- If you did not give an accurate history or did not follow the guidelines of the study and the regulations of the study facility, you may be withdrawn from the study at any time.

ETHICAL APPROVAL:

- This study protocol has been submitted to the University of the Witwatersrand, **Human Research Ethics Committee (HREC)** and written approval has been granted by that committee.

26. SOURCE OF ADDITIONAL INFORMATION:
If you want any information regarding your **rights as a research participant, or complaints regarding this research study**, you may contact Prof. Cleaton-Jones, Chairperson of the University of the Witwatersrand, Human Research Ethics Committee (HREC), which is an independent committee established to help protect the rights of research participants at +0027 (0)11 717 2301.

For **research information** you can contact

CONFIDENTIALITY:

- All information obtained during the course of this study, including hospital records, personal data and research data will be kept strictly confidential. Data that may be reported in scientific journals will not include any information that identifies you as a participant in this study.
- The information might be inspected by the University of the Witwatersrand, Human Research Ethics Committee (HREC), as well as your personal doctor. Therefore, you hereby authorise me to release your occupational therapy records to foreign regulatory health authorities, and the University of the Witwatersrand, Human Research Ethics Committee (HREC).
- These records will be utilised by them only in connection with carrying out their obligations relating to this study.
- Any information uncovered regarding your state of health as a result of your participation in this study will be held in strict confidence. You will be informed of any finding of importance to your health or continued participation in this study but this information will not be disclosed to any third party in addition to the ones mentioned above without your written permission. The only exception to this rule will be cases of communicable diseases where a legal duty of notification of the Department of Health exists. In this case, you will be informed of my intent to disclose such information to the authorised state agency.
- All information obtained during the course of this study, including hospital records, personal data and research data will be kept strictly confidential.
- All information that could identify you as a participant will be removed from data collected and replaced by codes so that you

cannot be identified. The codes will only be accessible by me as the researcher.

- All written and recorded data will be stored in secured files.
- Audio and video recordings will only be watched and listened to for the purposes of this study and not for any other purposes.
- Audio and video recordings will only be listened to and watched by the researcher and will not be accessible by any other person(s).
- All the recordings will be password protected and as the sole researcher, only Wendy Sherwood will have access to the passwords and recordings
- Immediately after the recorded occupational therapy sessions and interviews the recordings will be saved onto a computer file and labeled with an identification code number, not your name, participants' names or the name of the hospital and the recordings will be permanently deleted from the recorders.
- Information will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- When interview recordings have been transcribed by the researcher (approximately 2 months after recordings are made), the recordings will be permanently deleted from the computer
- When analysis of the recordings is completed (approximately six months after recordings are taken), all video recordings stored on computer will be permanently deleted from the computer
- Recordings made in South Africa may be taken on a computer to the UK and securely stored as described above
- You may ask that the recorder be turned off at any point during the study if there is something that you do not want recorded
- Data that may be reported in scientific journals will not include any information that identifies you or the hospital site as participating in this study.

PERSONAL DOCTOR / SPECIALIST NOTIFICATION OPTION:

Please indicate below, whether you want me to notify your personal doctor or your specialist of your participation in this study:

- YES, I want you to inform my personal doctor / specialist of my participation in this study.
- NO, I do not want you to inform my personal doctor / specialist of my participation in this study.
- I do not have a personal doctor / specialist

PARTICIPANT QUESTIONS*?:* Did the participant raise any questions? **YES / NO**
If YES – What where they:

INFORMED CONSENT (Patients):

- I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability
- I have also received, read and understood the above written information (Participant Information Leaflet and Informed Consent) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- I am aware that the information that I provide may be used in future studies.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

PARTICIPANT:

Printed Name	Signature / Mark or Thumbprint	Date and Time

I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

TRANSLATOR / OTHER PERSON EXPLAINING INFORMED CONSENT……(DESIGNATION):

Printed Name	Signature	Date and Time

WITNESS (If applicable):

Printed Name	Signature	Date and Time

INFORMED CONSENT TO THE MAKING OF AUDIO RECORDINGS (Patients):

- I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled 'An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability'

I am aware that audio recordings may be made of my participation in interviews with the researcher. The recordings will be made on a recorder which is a small hand-sized object that will stand on a shelf or table for the duration of the therapy session.

I am aware that:

- all data obtained during the course of this study will be kept strictly confidential as stated in the Informed Consent (Patients) form.
- immediately after the interview the audio recordings will be saved onto a computer file and labeled with an identification code number, not my name, participants' names or the name of the hospital and the recording will be permanently deleted from the recorder.
- recordings will be stored securely on a personal computer requiring a password to access it; the computer files containing recordings will also be password protected. Passwords will only be known by the researcher who will have sole access to the computer and recordings
- recordings will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- when audio recordings have been transcribed by the researcher (approximately 2 months after recordings are made), the audio recordings will be permanently deleted from the computer
- recordings made in South Africa may be taken on a computer to the UK and securely stored as described above.
- audio recordings will only be used for the purposes of this study and will not be used for any other purposes.
- audio recordings will only be listened to by the researcher and will not be accessible by any other person(s).
- I may ask that the recorder be turned off at any point during the study if there is something that I do not want recorded
- I may, at any stage, without prejudice, withdraw my consent for audio recordings to be made and/or used in the study and/or withdraw my consent to participation in the study
- I have had sufficient opportunity to ask questions and (of my own free will) I give consent for audio recordings to be made of my participation in interviews in this study.

PARTICIPANT:

Printed Name	Signature	Date and Time

,I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

WITNESS (If applicable):

Printed Name	Signature	Date and Time

INFORMED CONSENT TO THE MAKING OF VIDEO RECORDINGS (Patients):

- I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled 'An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability'
- I have received, read and understood the Participant Information Leaflet and Informed Consent [Patients]) regarding the study.

I am aware that video recordings may be made of my participation in occupational therapy sessions. The recordings will be made on a recorder which is a small hand-sized object that will stand on a shelf or table for the duration of the therapy session.

I am aware that:

- all data obtained during the course of this study will be kept strictly confidential as stated in the Informed Consent (Patients) form.
- immediately after the therapy session the video recording will be saved onto a computer file and labeled with an identification code number, not my name, participants' names or the name of the hospital and the recording will be permanently deleted from the recorder.
- all recordings will be stored securely on a personal computer requiring a password to access it; the computer files containing recordings will also be password protected and all passwords will only be known by the researcher who will have sole access to the computer and recordings.
- all recordings will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- when analysis of the recordings is completed (approximately six months after recordings are taken), all video recordings stored on computer will be permanently deleted from the computer
- recordings made in South Africa may be taken on a computer to the UK and securely stored as described above.
- recordings will only be used for the purposes of this study and not for any other purposes.
- video recordings will only be watched by the researcher and not by any other person(s).
- I may, at any stage, without prejudice, withdraw my consent for video recordings to be made and/or used in the study and/or withdraw my consent to participation in the study.
- I may ask that the recorder be turned off at any point during the study if there is something that I do not want recorded
- I have had sufficient opportunity to ask questions and (of my own free will) provide consent to have video recordings made of my participation in this study.

PARTICIPANT:

Printed Name	Signature	Date and Time

,I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

WITNESS (If applicable):

Printed Name	Signature	Date and Time

VERBAL PARTICIPANT INFORMED CONSENT:
(Applicable when participants cannot read or write)

- I, the undersigned, Wendy Sherwood have read and have explained fully to the participant, named ..... and/or his/her legal next of kin/legal representative,....., the participant information leaflet.
- The account I have given has explained both the possible risks and benefits of the study. The participant and/or his/her legal next of kin/legal representative understand these.
- The participant and/or his/her legal next of kin/legal representative indicated that he/she understands that the participant will be free to withdraw from the study at any time for any reason and without jeopardising his/her subsequent treatment.
- I have also informed the participant and/or his/her relative/friend/legal representative of the existence of relevant compensation arrangements in case of an injury attributable to the medicine(s) used in the the study, to which he/she agrees.

I hereby certify that the participant has agreed to participate in this study.

PARTICIPANT:

Printed Name	*Mark or Thumbprint (if applicable)*	*Date and Time*

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

TRANSLATOR / OTHER PERSON EXPLAINING INFORMED CONSENT:.....(DESIGNATION)

Printed Name	*Signature*	*Date and Time*

NEXTOF KIN/LEGALGUARDIAN/LEGALREPRESENTATIVE:.....(RELATIONSHIP)

Printed Name	*Signature / Mark or Thumbprint*	*Date and Time*

WITNESS:

Printed Name	*Signature*	*Date and Time*

Appendix D

Appendix D Recruitment poster for members of the public at a sports centre (UK).

Research into effort and maximum effort.

Are you over 18?

Do you do physical activity at this club which is physically and/or mentally effortful?

If you answered YES to these questions you may be eligible to participate in a research study of effort.

Wendy Sherwood is an Occupational Therapist who is exploring the concept of effort with members of the public who do activity which they find physically and/or mentally demanding. This is part of a larger PhD study. The purpose of the study is to conceptualise effort and explain its influence on a person's decision to do activity, participate in activity and the benefits of effort. The findings will contribute to Occupational Therapists' (healthcare professionals) understanding of the potential benefits of effort to health and how effort may be elicited from patients during therapy for therapeutic benefit.

Taking part is voluntary and confidential and will take place at this club at a time that is convenient to participants.

For more information, please ask for an information pack at reception and contact Wendy Sherwood:

Appendix E

Appendix E members of the public information sheet and informed consent

UNIVERSITY OF THE WITWATERSRAND HUMAN RESEARCH ETHICS COMMITTEE INFORMED CONSENT

INFORMED CONSENT (General Public)

STUDY TITLE: An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability

INVESTIGATOR: This leaflet is about research being undertaken by Wendy Sherwood who is interested in finding out what it takes for a person to do activity. This 'finding out' is a piece of research for a PhD.

INSTITUTION: The University of the Witwatersrand, Johannesburg.

DAYTIME TELEPHONE NUMBER RSA: . UK
AFTER HOURS TELEPHONE NUMBER(S): RSA: . UK
Researcher's email address:

To the potential Participant: *This consent form may contain words that you do not understand. Please ask the researcher or the study staff to explain any words or information that you do not clearly understand. You may take home **an unsigned copy of this consent** form to think about or discuss with family or friends **before making your decision.***

INTRODUCTION:
Good day, my name is Wendy Sherwood, I am a lecturer in Occupational Therapy at.....in England and a PhD student at the University of the Witwatersrand, Johannesburg. I wish to invite you to consider participating in a research study, entitled "An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability".

Before agreeing to participate, it is important that you read and understand the following explanation of the purpose of the study, the study procedures, benefits and risks and your right to withdraw from the study at any time.

This information leaflet is to help you to decide if you would like to participate. You need to understand what is involved before you agree to take part in this study. If you have any questions, do not hesitate to ask me. You should not agree to take part unless you are satisfied about all the procedures involved. If you decide to take part in this study, you will be asked to sign this document to confirm that you understand the study. You will be given a copy to keep.

PURPOSE OF THE STUDY:
I am a postgraduate research student registered at the University of the Witwatersrand, Johannesburg, South Africa. The aim of this study is to describe what it takes for people to do activity. This investigation will involve me observing you undertaking an agreed activity and/or interviewing you about doing the activity. I hope that the findings of the study will enable occupational therapists to better identify how to enable people to do activity.

LENGTH OF THE STUDY AND NUMBER OF PARTICIPANTS:
This study has already collected information from occupational therapists and patients in the UK and in South Africa. This current stage of the study is seeking to recruit approximately 50 members of the public as participants in the study.
The participants will be between the ages of 18 and 70. I shall be doing research for approximately 12 months, but your participation will be over a couple of weeks at the most. The total amount of time required for your participation in this study will be a maximum of 4 hours a week for 2 weeks, and the majority of this time will be time spent in your usual activities.

PROCEDURES:
If you agree to take part in this study, I will arrange a time that is convenient for you, for me to either observe you whilst you are undertaking an activity and/or to interview you about how you undertake particular activities. If we agree that I can observe you doing an activity, you will do the activity in your usual way and I shall be observing and listening in order to understand what is happening. If there is a good moment for me to ask a question or enter into conversation with you, I may take that opportunity if it does not interfere with your activity. The time spent doing your activity may be videoed so that I can review it afterwards. At some stage after the activity, I may also ask for time to talk with you in a 45-60 minute interview about your experience of the activity. This is so that I can find out more about how you decided to do the activity and continue with the activity and what you gained from doing it. Alternatively, I may not undertake an observation but only ask to interview you for approximately 45-60 minutes about your activities. I want to audio record the interviews if you are happy for me to do so. This is so that I can listen to the interview several times in order to fully understand what was discussed.
In the future, it may be necessary to do another study like this one and compare what was found out in each study. Therefore, I am also asking you to give permission for me to use the information I gain from you, in similar future studies. You will not be identified in this or future studies – your name, personal details, name of the place where you did your activity or were interviewed will not be used in this or future studies. Please see the information on Confidentiality below.

WILL ANY OF THESE STUDY PROCEDURES RESULT IN DISCOMFORT OR INCONVENIENCE? I shall be attending your routine activity times therefore there should be no inconvenience to you. The interviews will be arranged for a time that suits you and will take place at a place that is convenient to you.

RISKS OF THE STUDY There is the potential for participants to find talking about experiences and views anxiety provoking or uncomfortable. At the end of the interview you will be offered time to discuss any concerns or questions you may have about the interview. You have the right to end the interview at any time without telling me why.

BENEFITS:
The potential benefit from your participation in this study may be that occupational therapists are better able to provide effective therapy because they better understand what it takes to do activity.

RIGHTS AS A PARTICIPANT IN THIS STUDY:
Your participation in this study is entirely voluntary and you can decline to participate, or stop at any time, without stating any reason. You may, at any stage, without prejudice, withdraw your consent and participation in the study.

Withdrawal:
You may, at any stage, without prejudice, withdraw your consent and participation in the study. I retain the right to withdraw you from the study if it is considered to be in your best interest.

ETHICAL APPROVAL:
This study protocol has been submitted to the University of the Witwatersrand, **Human Research Ethics Committee (HREC)** and written approval has been granted by that committee.

26. SOURCE OF ADDITIONAL INFORMATION:
RSA: +.....to contact Dr Daleen Casteleijn (study supervisor)
If you want any information regarding your **rights as a research participant, or complaints regarding this research study**, you may contact Prof. Cleaton-Jones, Chairperson of the University of the Witwatersrand, Human Research Ethics Committee (HREC), which is an independent committee established to help protect the rights of research participants at +0027 (0)11 717 2301.
For **research information** you can contact Wendy Sherwood: .....or
Dr Daleen Casteleijn: + ...

CONFIDENTIALITY:

- All information obtained during the course of this study, including personal data and research data will be kept strictly confidential. Data that may be reported in scientific journals will not include any information that identifies you as a participant in this study.

- Any information uncovered regarding your state of health as a result of your participation in this study will be held in strict confidence
- The information might be inspected by the University of the Witwatersrand, Human Research Ethics Committee (HREC). Therefore, you hereby authorise me to release data collected to the University of the Witwatersrand, Human Research Ethics Committee (HREC).
- This data will be utilised by them only in connection with carrying out their obligations relating to this study.
- All information that could identify you as a participant will be removed from data collected and replaced by codes so that you cannot be identified. The codes will only be accessible by me as the researcher.
- All written and recorded data will be stored in secured files.
- Audio and video recordings will only be watched and listened to for the purposes of this study and not for any other purposes.
- Audio and video recordings will only be listened to and watched by the researcher and will not be accessible by any other person(s).
- All the recordings will be password protected and as the sole researcher, only Wendy Sherwood will have access to the passwords and recordings
- Immediately after the recorded activity sessions and interviews the recordings will be saved onto a computer file and labeled with an identification code number, not your name, participants' names or the name of the site of data collection and the recordings will be permanently deleted from the recorders.
- Information will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- When interview recordings have been transcribed by the researcher (approximately 2 months after recordings are made), the recordings will be permanently deleted from the computer
- When analysis of the recordings is completed (approximately six months after recordings are taken), all video recordings stored on computer will be permanently deleted from the computer
- Recordings made in South Africa may be taken on a computer to the UK and securely stored as described above You may ask that the recorder be turned off at any point during the study if there is something that you do not want recorded
- Data that may be reported in scientific journals will not include any information that identifies you or the data collection site as participating in this study.

PARTICIPANT QUESTIONS*?:*
Did the participant raise any questions?
YES / NO
If YES – What where they:

INFORMED CONSENT (General Public):

- I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability
- I have also received, read and understood the above written information (Participant Information Leaflet and Informed Consent) regarding the study.
- I am aware that the results of the study, including personal details regarding my sex, age, date of birth, and initials will be anonymously processed into a study report.
- I am aware that the information that I provide may be used in future studies.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.

PARTICIPANT:

Printed Name Signature Date and Time

I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name *Signature* *Date and Time*

WITNESS (If applicable):

Printed Name Signature

INFORMED CONSENT TO THE MAKING OF AUDIO RECORDINGS (General Public):

I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled 'An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability'

I have received, read and understood the Participant Information Leaflet and Informed Consent [General Public] regarding the study.

I am aware that audio recordings may be made of my participation in interviews with the researcher. The recordings will be made on a recorder which is a small hand-sized object that will stand on a shelf or table for the duration of the activity.

I am aware that:

- all data obtained during the course of this study will be kept strictly confidential as stated in the Informed Consent (General Public) form.
- immediately after the interview the audio recordings will be saved onto a computer file and labeled with an identification code number, not my name, participants' names or the name of the data collection site and the recording will be permanently deleted from the recorder.
- recordings will be stored securely on a personal computer requiring a password to access it; the computer files containing recordings will also be password protected. Passwords will only be known by the researcher who will have sole access to the computer and recordings
- recordings will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- when audio recordings have been transcribed by the researcher (approximately 2 months after recordings are made), the audio recordings will be permanently deleted from the computer
- recordings made in South Africa may be taken on a computer to the UK and securely stored as described above.
- audio recordings will only be used for the purposes of this study and will not be used for any other purposes.
- audio recordings will only be listened to by the researcher and will not be accessible by any other person(s).
- I may ask that the recorder be turned off at any point during the study if there is something that I do not want recorded
- I may, at any stage, without prejudice, withdraw my consent for audio recordings to be made and/or used in the study and/or withdraw my consent to participation in the study
- I have had sufficient opportunity to ask questions and (of my own free will) I give consent for audio recordings to be made of my participation in interviews in this study.

PARTICIPANT:
PARTICIPANT:

Printed Name	Signature	Date and Time

I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

WITNESS (If applicable):

Printed Name	Signature

INFORMED CONSENT TO THE MAKING OF VIDEO RECORDINGS (General Public):

I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled 'An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability'

I have received, read and understood the Participant Information Leaflet and Informed Consent [General Public] regarding the study.

I am aware that video recordings may be made of my participation in occupational therapy sessions. The recordings will be made on a recorder which is a small hand-sized object that will stand on a shelf or table for the duration of the activity.

I am aware that:

- all data obtained during the course of this study will be kept strictly confidential as stated in the Informed Consent (General Public) form.
- immediately after the activity the video recording will be saved onto a computer file and labeled with an identification code number, not my name, participants' names or the name of the data collection site and the recording will be permanently deleted from the recorder.
- all recordings will be stored securely on a personal computer requiring a password to access it; the computer files containing recordings will also be password protected and all passwords will only be known by the researcher who will have sole access to the computer and recordings.
- all recordings will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- when analysis of the recordings is completed (approximately six months after recordings are taken), all video recordings stored on computer will be permanently deleted from the computer
- recordings made in South Africa may be taken on a computer to the UK and securely stored as described above.
- recordings will only be used for the purposes of this study and not for any other purposes.
- video recordings will only be watched by the researcher and not by any other person(s).
- I may, at any stage, without prejudice, withdraw my consent for video recordings to be made and/or used in the study and/or withdraw my consent to participation in the study.
- I may ask that the recorder be turned off at any point during the study if there is something that I do not want recorded
- I have had sufficient opportunity to ask questions and (of my own free will) provide consent to have video recordings made of my participation in this study.

PARTICIPANT:

Printed Name	Signature	Date and Time

I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

WITNESS (If applicable):

Printed Name	Signature

VERBAL PARTICIPANT INFORMED CONSENT:

(Applicable when participants cannot read or write)

I, the undersigned, Wendy Sherwood have read and have explained fully to the participant, named ..... and/or his/her legal next of kin/legal representative,....., the participant information leaflet.

- The account I have given has explained both the possible risks and benefits of the study. The participant and/or his/her legal next of kin/legal representative understand these.
- The participant and/or his/her legal next of kin/legal representative indicated that he/she understands that the participant will be free to withdraw from the study at any time for any reason and without jeopardising his/her subsequent treatment.
- I have also informed the participant and/or his/her relative/friend/legal representative of the existence of relevant compensation arrangements in case of an injury attributable to the medicine(s) used in the study, to which he/she agrees.

I hereby certify that the participant has agreed to participate in this study.

PARTICIPANT:

Printed Name	*Mark or Thumbprint (if applicable)*	*Date and Time*

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

TRANSLATOR / OTHER PERSON EXPLAINING INFORMED CONSENT:.....(DESIGNATION)

Printed Name	*Signature*	*Date and Time*

NEXTOF KIN/LEGALGUARDIAN/LEGALREPRESENTATIVE:.....(RELATIONSHIP)

Printed Name	*Signature / Mark or Thumbprint*	*Date and Time*

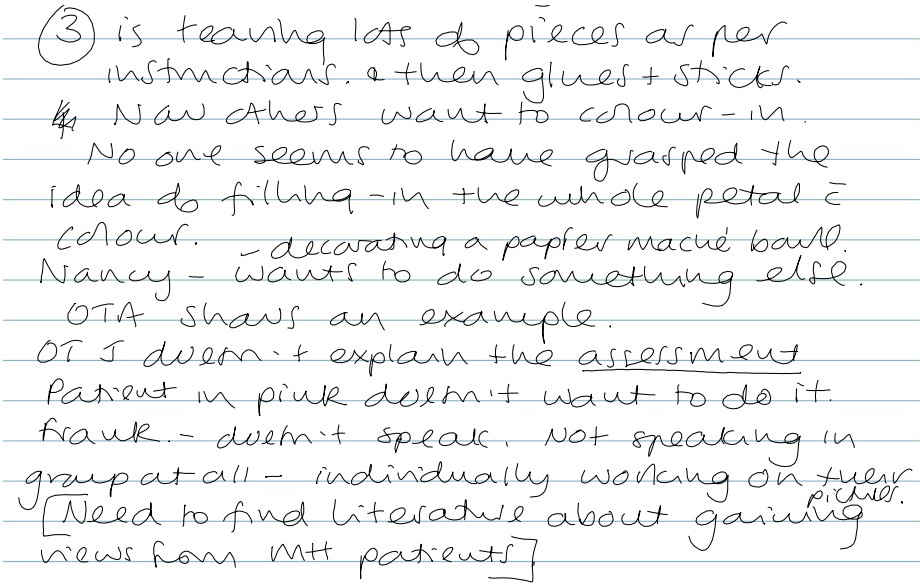
WITNESS:

Printed Name	*Signature*	*Date and Time*

Appendix F

Appendix F Field note example

This example is a field note made on a group activity. The note starts with a note on participant number 3 in the group.



Appendix G

Appendix G Theoretical memo examples

Below, are two examples of different ways that I made theoretical memos. The first memo identifies the category that the insight might belong to. The second memo example indicates developing concepts numerically in the first column, enabling cross referencing and constant comparison of the similar incidents. The use of colours enabled me to quickly see ideas for questions in further interviews (green), developing theory (blue) and concepts and properties (yellow)

Date	Content/ memo	Related to which category?
10.08.12	Memo on the group assessment session – activity of completing flower picture. Continued revealing / discovery of how individually defined effort is in terms of meaning, what is and is not effort, reasons for effort and none effort. There are consistencies such as no effort = absence of doing or less doing. However, what kinds of doing are effort, is defined by what the person values / trying to achieve/aiming for. *Need to ask about most and least effort in each activity as it might show what they are aiming for??*	Reasons for doing/effort

2.1.3*	There is effort in thinking about and understanding and responding, not just in the doing – action isn't enough, it is the *way* of the action in relation to ability and what is demanded of you or the opportunity that is presented. Bringing own initiative.
05.08.11 2.2	Topix game observation. Asking questions and reaching for items in the game seems to be interest, wanting to understand the game and a keenness to start. OT encourages E - : "you can do it". Keenness to play/win makes some move too quickly and make mistakes. OT asks Emmanuel if he is going to take the challenge (to write the answers). Body posture is close, leaning forward, listening/attending. As one team begins to lose, they look intense, frustrated whilst winning team that are finding it 'easier' are smiling and look as though they are enjoying themselves.
2.2*	Doing in response to the demand of the activity. OT (J) later talks about the lack of effort seen in one participant in terms of not meeting the demands of the activity fully – not concerned with the interaction aspect.
2.3	Interview with **I -** , partly talking about the group observed on 04.08.11. Bk 1, p7-8. Doing that doesn't feel like effort = relaxing, familiar, at own pace, for own benefit - familiar, predictable, easier – "just"…). Not straining (rather then the work of therapy), in control of/choice (in own time, not according to therapy schedule – told that you have to do something). Effort is straining self, which is necessary in order to achieve something (a challenge), striving. He talks of effort in terms of "the power, the thinking and the courage to put in", which suggests that it requires something of the person. is it something obvious to the person? Is it a sensation / feeling? Line coding: effort is in relation to own perception of difficulty and the activity's value?? Is - perceives doing things with others as good and effortful: what isn't effortful is doing things on his own, at his own pace. The consequences is that it gives him joy, a nice thing to do.
2.3*	Not so effortful if it is something you choose to do, are in control of and is not a challenge. Straining in order to achieve – links with pushing boundaries to achieve
05.08.11 2.4	Interview with **J -** partly about the activity observed on 04.08.11. Effort is very particularly defined by J – person and to do with him. His effort in relation to the past: he didn't put enough effort in and wasted time with not progressing; in the present he is trying to improve for a different outcome to the past = a changed self, furthering self. He was trying to get things right; ?mental effort – experiencing mental blocks during the competitive game (didn't flow x2.1.1);

	?physical effort re: asserting himself physically when weak – is this effort when under challenge/pressure? This is something that is not coming easily He also talks about effort in relation to something that doesn't quite fit the self e.g., doing something he finds boring, having to communicate with people who are as he used to be and not the same as him now in motives (doesn't have a choice about this). Therefore, there is effort in participation with something/someone that are not valued / identified with. Effort is work, trying and is linked to frustration when outcome is not good or what he wanted i.e., not getting it right. Effort is for getting it [himself] right, therefore he participates in rehab and tedious tasks such as talking with others in order to achieve this goal.
2.5	From interview with **V -** about Topix game. What is effortful is doing something for which you do not already have the knowledge and/or skills e.g., didn't know the meaning of all the words, didn't know all the answers, working under pressure (against the clock), following instructions (for something new), focusing (has poor concentration), jumping and running (a smoker and finds breathing difficult) – bk 1, p24. Effort is in doing new, unfamiliar things and things that are a challenge such as answering a lot of questions in psychology sessions, Effort is when something is taken from him, uses his energy. The consequences are that it prevents him from getting sick, gets him in motion. Puts effort into things that he finds interesting off his own back e.g., reading [choice, control]

Appendix H

Appendix H Examples of interview questions used in the current study

- why did you do [aspect of the observed activity] or not do [aspect of the observed activity]?
- was it [the activity participation] an effort?
- what is effort?
- what doesn't require effort? [for you]
- how do you know there has been effort?
  what does effort look like?Appendix I

Appendix I

Appendix I Open, final and core codes.

Early open codes	Final open codes	Core codes
Power to put in Resources	Ability for effort	Person
Concentrating Bringing initiative Thinking about what is being demanded of you. Focused faculties Actively attending to task Seeing the cogs turning Giving attention	Thinking in / for doing	**Thinking in doing** (sign of effort)
Feeling about the thoughts about doing Willingness Preparedness Thinking about what activity participation means to you.	Attitude towards activity participation	**Attitudinal response** (Decision response) (Condition)
Responding Gauging where to direct effort Decides to overcome hesitation Willing to try despite reluctance Decision to try	Making a decision	**Decision response**
Doing Participating Engaged Doing the activity: demands Doing the activity: meaning Making contact with his world Being involved Being active	Activity participation	Activity participation (Relating)
Interest Values beliefs	Properties of wanting	Motivation (Condition)
Wanting to do something Liking Pleasurable Awareness of things and self Spark Aiming to achieve Wanting to progress	Reasons for doing - wanting	Motivation: wanting for oneself
Acting with purpose Directed towards Acting with intention Aiming Directing resources towards getting the job done	Intention	(**Relating)**
Taking for self from doing Tangible and intangible products	Wanting something for oneself	**Wanting something for oneself**
Putting self into it Stretch myself Push myself Show that I can do it Proving I can I am Taking for self from doing Demonstrating powers Showing people I participated	Wanting something of oneself	I-am-ing **Wanting something for oneself**

Needs motivation Needs to be encouraged Needs approval Being enticed to do more / continue Needs input from another person	Getting motivated	**Negotiating effort**
Is it worth it? Pros and cons Can I do it? Is the activity of value? What's the reward?	Weighing-up	**Weighing-up**
Putting in Whole strength Putting in Yourself Putting in Everything Putting in Time Putting in Thought Putting in Enthusiasm Putting in energy Putting in power Putting in one's abilities / as much as is available. Giving attention Give yourself to the moment Bringing my best Give of self what the activity is asking. Self emptying Giving away something of ourselves to others.	Putting in	Putting in (Effort)
Trying Trying best Trying hard Working	Trying Exerting	Trying (Effort)
Doing that doesn't come readily Doing outside of comfort zone	Doing that's not readily available Uncomfortable	Demands
Doing well Doing the best that you are capable of Using all resources Able to do	Doing to full capabilities	**Effortful** Max effort (sign of effort)
Asserting self Exerting Applying self Using yourself	Applying self	**Putting in** **Trying** **Exerting**
Overcoming obstacles Overcoming difficulties Coping with difficulties in activity participation Managing something that is not comfortable Problem-solving	Overcoming obstacles	(Sign of effort) (overcoming challenges)
Overcoming Anxiety Overcoming Hesitation Overcoming Reluctance Overcoming Negative thoughts Overcoming Being unsure Managing distress Willing to try despite anxieties / reluctance.	Overcoming feelings	(Sign of effort) **overcoming challenges**
On the edge of ability Straining Pushing self Pushing the boundaries of ability Exerting self with difficulty Not having adequate knowledge/skill for the activity. Stretching	Pushing the boundary of ability	Exerting Effort
Persisting Overcoming obstacles Coping	Not giving up	**Sustained effort** (Sign of effort)

Managing Being resilient Coping with feelings Working through frustrations Coping with difficulties in activity participation		
Keep going despite being tired or unmotivated Keeps going as long as it takes Keep effort the same throughout Continued effort in doing Maintains momentum Maintaining energy levels Not giving up Not stopping	Keeping going	Keeping going (Sign of effort)
Enduring / Endurance Tolerance Persisting	Enduring	**Keeping going** (Sign of effort)
Having energy taken from me Being taken out of Tiring. Being drained. Being depleted	Taken out	Effort **Taken out** Consequence
Demands Challenges Degree of difficulty Degree of familiarity Degree of mastering Degree to which it meets needs / wants	Demands	**Activity participation demands**
Sustained No discernible effort – nothing seen emotionally, cognitively, physically Erratic, unreliable Doing a lot Doing for a long time	Effort in quantity	Strength of effort **Quantity and quality**
Doing quickly Doing the best that you are capable of Doing well / with care The way that he does it	Effort in quality	(Quantity and quality) (Sign of effort)
Becoming tired Slowing down Sighing Shifting position Losing interest / care / motivation	Diminishing Effort	**Waning effort**
Only as required, no more Having the skills/ability Doing to acceptable level, no more Knowing can do it Doing very easily Not putting a lot of thought into it Just randomly doing Sitting back Not being demanded of Not willing Passive Does for a bit, then stops Not trying to do it properly Not caring Not paying attention Not doing much No intention Just doing it without trying	Minimal effort	**least/minimal effort**
Unable to meet the demands of the activity/environment. Demand is beyond reach / ability.	Limited effort	**Limited effort**

Activity is too difficult		
Within ability Not having to try your very best Activity doesn't demand of you Automatic doing "just doing" doing easily not thinking behind the doing / planning doing without thinking	Comfort zone	**Comfort zone**
Extended energy to behave occupationally On border of ability Challenged Getting tired Doing at the very edge of ability Going beyond expectations/requirements Concerted effort Transcend Going the extra mile Keeps trying in failure Using the most that you have Action at border of ability Using everything in self Using all faculties to full ability Pushing self more Maximizing what you're doing Doing at a different level	Maximum effort	**Maximum effort**
Unconcerned about doing Giving up Not trying Doing easily, used to it Doing something familiar, mastered Just cruising Not doing Not putting self forward Only doing as required, no more No connection with doing/people	Not effort	**No effort by choice**
Can't do it / no skill/ ability Not doing Giving up Not putting self forward Only doing as required, no more	Not effort	**Not effort due to inability**
Getting out what put in What you want / need Internal and tangible Growth Furthering self Improving Satisfaction Enjoyment Determining new behaviours	Consequences	Consequences
Moderating effort Enabling effort Hindering effort	Environment	Environment as moderator of effort
Helped me Made me feel like doing me He thought I should do it I can't let them down Spurred me on	Motivated by others	**Motivated by others**

Appendix J

Appendix J Sample of literature theoretically sampled for constant comparative analysis and conceptual development.

	Concepts and categories of relevance
Guadagnoli M.A., Lee, T.D. (2004) Challenge Point: A Framework for Conceptualizing the Effects of Various Practice Conditions in Motor Learning	maximum effort, demands
White, A. (2008) From Comfort Zone to Performance Management. Understanding development and performance.	comfort zone, no effort, anxiety and effort
Beale, C (2007) Mothers' experiences of raising a child with autism. Doctoral thesis in part fulfilment of the Lancaster University Doctorate in Clinical Psychology.	comfort zone, peop demands
Almqvist, L., Uys, C.J.E., Sandberg, A. (2007) Concepts of participation, engagement and flow: a matter of creating optimal play experiences.	engagement, motivation, demands, quantity
Lepine, J.A., Podsakoff, N.P., Lepine, M.A. (2005) A meta-analytic test of the challenge stressor–hindrance stressor framework: an explanation for inconsistent relationships among stressors and performance.	negative effort, minimal effort
Lazarus, R. S., & Folkman, S. (1984) Stress, appraisal, and coping.	weighing-up, emotion and effort
Amador, X.F., Strauss, D.H., Yale, S.A., Gorman, J.M. (1991) Awareness of illness in schizophrenia.	awareness
Markova, S.I., Berrios, G.E. (2006) Approaches to the assessment of awareness: Conceptual issues.	awareness, relate
Quick, J. C., Quick, J. D., Nelson, D. L., & Hurell, J.J. (1997) Preventative stress management in organizations.	demands
Bagozzi, R. P., Moore, D.J., Leone, L. (2004) Self-Control and the Regulation of Dieting Decisions: The Role of Prefactual Attitudes, Subjective Norms, and Resistance to Temptation.	attitude decision-making
Paul, A. (2008) A grounded theory investigation of awakening/realization in direct/top-down approach: implications for a psychology of awakening.	relating
Schwarzer, R. (1999) Self-regulatory Processes in the Adoption and Maintenance of Health Behaviors The Role of Optimism, Goals, and Threats.	attitude, intention
Baumeister, R., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. Psychological Bulletin, 117 (3), 497-529.	relatedness , motivation
Strobbe S (2009) Alcoholics Anonymous: personal stories, relatedness, attendance and affiliation. PhD (Nursing) University of Michigan.	comfort zone, relatedness
Dunn, W., Brown, C., McGuigan, A. (1994) The ecology of human performance: A framework for considering the effect of context. American Journal of Occupational Therapy, 48, 595-607.	relatedness
Wynne, L. C. (1984). The epigenesis of relational systems: A model for undertaking family development. Family Process, 23, 297-318.	relatedness
La Guardia, J.G., Patrick, H. (2008) Self-Determination Theory as a Fundamental Theory of Close Relationships. Canadian Psychology, 49(3), 201–209.	relatedness, willingness, motivated by others
Kusurkar R, Croiset G, Kruitwagen C, Ten Cate O Validity evidence for the measurement of the strength of motivation for medical school. Advances in Health Science Education, (2011) 16 (2), 183–195.	strength of motivation
Hosea RA (2011) Negotiating comfort-discomfort: a grounded theory of understanding students' decision-making process for seeking or not seeking help to resolve interpersonal conflict. Nova Southeastern University,	relatedness, comfort zone, attitude
Miller, J.B.1984). The development of women's sense of self. Work in Progress No. 12. Wellesley, MA: Stone Center Working Papers Series.	link between interest and effort
Cho MH 2004 The strength of motivation and physical activity level during leisure time among youth in South Korea. Youth & Society, 35(4), 480-494.	energy, quantity and quality
Carroll, B., & Alexandris, K. (1997). Perception of constraints and strength of motivation: Their relationship to recreational sport participation in Greece. Journal of Leisure Research, 29, 279-299.	readiness, attitudes with strength of motivation.
Brunstein, J.C., & Gollwitzer, P.M. (1996). Effects of failure on subsequent performance: The importance of self-defining goals. Journal of Personality and Social Psychology, 70, 395-407.	intention, strength of motivation
Crabtree JL (2003) On occupational performance. Occupational Therapy in Health Care, 17(2), 1-18.	intention, decision for effort
Alderfer CP (1969) An empirical test of a new theory of human needs. Organizational Behavior and Human Performance, 49, pp142-75.	awareness
Kaplan S (1995) The restorative benefits of nature: toward an integrative framework. Journal of Environmental Psychology, 15, 169-82.	attention
Griffiths S (2000) The clinical utility of creative activities used as an occupational therapy treatment medium for people with mental health problems. MSc study. COT thesis collection.	motivated by others
Reis, H. T., Sheldon, K. M., Gable, S. L., Roscoe, J., & Ryan, R. M. (2000). Daily well-being: The role of autonomy, competence, and relatedness. Personality and Social Psychology Bulletin, 26 (4), 419–435.	relatedness

Appendix K

Appendix K Focus group Participant Information Sheet and Informed Consent.

UNIVERSITY OF THE WITWATERSRAND HUMAN RESEARCH ETHICS COMMITTEE INFORMED CONSENT

PARTICIPANT INFORMATION SHEET
AND INFORMED CONSENT (Focus group)

STUDY TITLE: An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability

INVESTIGATOR: This information is about research being undertaken by Wendy Sherwood who is interested in finding out whether a theory generated from her PhD research, offers a plausible explanation of effort and maximum effort for activity participation.

INSTITUTION: The University of the Witwatersrand, Johannesburg.

DAYTIME TELEPHONE NUMBER +
AFTER HOURS TELEPHONE NUMBER(S): +
Researcher's email address:

To the potential Participant: *This consent form may contain words that you do not understand. Please ask the researcher or the study staff to explain any words or information that you do not clearly understand. You may take home* ***an unsigned copy of this consent*** *form to think about or discuss with family or friends* ***before making your decision.***

INTRODUCTION:
Good day, my name is Wendy Sherwood, I am a lecturer in Occupational Therapy at London South Bank University in England and a PhD student at the University of the Witwatersrand, Johannesburg. I wish to invite you to consider participating in a research study, entitled "An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability".
Before agreeing to participate, it is important that you read and understand the following explanation of the purpose of the study, the study procedures, benefits and risks and your right to withdraw from the study at any time.
This information leaflet is to help you to decide if you would like to participate. You need to understand what is involved before you agree to take part in this study. If you have any questions, do not hesitate to ask me. You should not agree to take part unless you are satisfied about all the procedures involved.
If you decide to take part in this study, you will be asked to sign this document to confirm that you understand the study. You will be given a copy to keep.

PURPOSE OF THE STUDY:
I am a postgraduate research student registered at the University of the Witwatersrand, Johannesburg, South Africa. The aim of this study is to develop a theory of effort and maximum effort for activity participation. That is, conceptualise effort and explain its influence on a person's decision to do activity, participate in activity and the benefits of effort.

The study has two phases of data collection. Phase one is complete and involved the researcher developing a theory of effort from observing patients and occupational therapists during routine occupational therapy sessions and/or interviewing them about effort during activity participation. Phase two will involve a focus group comprising of occupational therapists and members of the public for discussion of the theory of effort developed from phase one. At this stage I am inviting you to participate in phase two of the study.
I hope that the findings of the study will enhance the occupational therapy profession's understanding of the nature of activity participation and better enable therapists to understand how to enable people to do activity through understanding effort. The findings will contribute to an existing occupational therapy theory called the theory of creative ability.

PHASE 2.
LENGTH OF THE STUDY AND NUMBER OF PARTICIPANTS:
This phase of the study involves a total of 4 occupational therapists from South Africa and the UK and 2 members of the public from the UK. Participants will be invited to participate in one online focus group of approximately one hour. A focus group is a planned, structured small group interview on a specific topic; in this instance it is the Phase 1 findings of this study which explains effort and maximum effort. The group will take place via the computer and through an internet link. The group will take place either in the evening or on the weekend and outside of your employed working hours.
The group will take place in June/July 2013 as convenient to the participants.

Sample: occupational therapists

Two occupational therapists will be invited from South Africa: one therapist that participated in Phase 1, and one therapist that was not invited and did not participate in Phase 1. The same sample composition will also be sought in the UK.

Inclusion criteria:

- State registered occupational therapist in either South Africa or the UK
- Participated in Phase 1 of the study
- Currently practicing as an occupational therapist in either healthcare or occupational therapy education
- Able to speak English
- Has access to a computer with internet connection in the evenings and weekends
- Is able to use a computer to access the internet and follow on-screen instructions
- Has a minimum of one year's experience of implementing the theory of creative ability in practice

One occupational therapist is also sought who meets the additional criteria of:

- Recognised within the occupational therapy profession as an expert in the theory of creative ability

Sample: general public:

Two members of the general public that took part in Phase 1 will be invited

Inclusion criteria:

- Member of the public who participated in Phase 1 of the study
- Has access to a computer with internet connection in the evenings and weekends
- Is able to use a computer to access the internet and follow on-screen instructions

PHASE 2 PROCEDURES:
The focus groups in this study will take place online via the computer and the internet. You can decide what the best location is for taking part. However, it should be a place where you have privacy and can participate without the group being overheard or viewed by others and where you will not be interrupted. The group will occur either on an evening or a weekend, so you could take part from home if that suits you.

You will need to have earphones or headphones that can be plugged into your computer so that the group is audible to you and not to anyone else in the vicinity. If you do not own earphones or headphones, a pair will be made available to you by the researcher. You will also need to use either the computer's built-in microphone or use a headset microphone.
The online focus group is participated in by going to an internet address provided by the researcher. You will be required to enter a username (code name provided by the researcher) and password (provided to

you by the researcher), and this enters you into a virtual 'classroom'. Your code name will appear at the top of the screen, as will the code names of all participants as they log into the site.

Having logged into the site, you will see a slide similar to a Power Point slide on the screen. During the course of the focus group, the slides will be used to present the theory for discussion, and you will hear the researcher presenting the slides in real time. You will also be able to see the researcher's face to the right of the slide, so that you can see the presenter in real time.

During the presentation, you will have the opportunity to type questions or comments and these appear to the right of the slide. Comments and questions are in view of all participants, who can respond and add to your contributions. The researcher can also see these postings and can stop the presentation to respond and enter into a discussion with participants. Participants can indicate that they want to verbally speak with the researcher or other participants by clicking on a microphone symbol. The researcher activates the microphone facility so that the participant can be heard by the group. When the presentation is over, there will be a researcher facilitated discussion until the end of the focus group time.
At the close the group, participants log out of the internet site and will have no further access to that site. The focus group will be recorded as a visual record of questions and comments posted by participants, and as an audio-visual record of the verbal discussions.

Should a participant lose internet connection during the group and is unable to regain it in time to re-enter the group, s/he will receive new log-in details by e-mail that will allow him/her to view and hear the recording of the group. The log-in details will only be valid for 48 hours. Having reviewed the group discussion, the participant will have the opportunity to contribute his/her thoughts and comments on what was discussed in the group, by e-mail with the researcher.

A week prior to the group, you will receive an e-mailed copy of the theory of effort for discussion. You will have a week to read the theory and formulate thoughts and questions about it. These will be sought during the focus group. The focus group will be arranged for either a week day evening or a weekend day and time during June-July 2013 that is convenient to all the participants.

A week prior to the focus group, you will be invited to take part in an online introductory discussion that aims to familiarise you with the information technology being used for the focus group. This will be arranged at a time that is convenient to you and outside of your employed working hours.
Because this is a computer mediated focus group, it is important that you have access to and can use a computer and that you have a reliable internet connection.

WILL ANY OF THESE STUDY PROCEDURES RESULT IN DISCOMFORT OR INCONVENIENCE? The focus group will be arranged for a day and time that suits you and will take place either on an evening or at a weekend. You will take part in the environment that is most suitable to you.
RISKS OF PHASE 2 OF THE STUDY: There is the potential for participants to find sharing their views anxiety provoking or uncomfortable. After the focus group you will be offered time to discuss with the researcher any concerns or questions you may have about the focus group. You have the right to withdraw from the focus group at any time without telling me why.
BENEFITS:
The potential benefit from your participation in this study may be that occupational therapists are better able to provide effective therapy because they better understand effort for activity participation.
RIGHTS AS A PARTICIPANT IN THIS STUDY:
Your participation in this study is entirely voluntary and you can decline to participate, or stop at any time, without stating any reason. Your withdrawal will not affect your professional career in any way. Should you withdraw any data collected from your direct participation will be removed from the study.
Withdrawal:

- Your withdrawal will not affect your professional career in any way.
- I retain the right to withdraw you from the study if it is considered to be in your best interest.
- If you did not follow the guidelines of the study and the regulations of the study facility, you may be withdrawn from the study at any time.

ETHICAL APPROVAL:

- This study protocol has been submitted to the University of the Witwatersrand, Human Research Ethics Committee (HREC) and the necessary Local Research Ethics Committees in the UK. Written approval has been granted by these committees.

SOURCE OF ADDITIONAL INFORMATION:
+.....to contact Dr Daleen Casteleijn (study supervisor);

If you want any information regarding your **rights as a research participant, or complaints regarding this research study**, you may contact Prof. Cleaton-Jones, Chairperson of the University of the Witwatersrand, Human Research Ethics Committee (HREC), which is an independent committee established to help protect the rights of research participants at +0027 (0)11 717 2301.
For **research information** you can contact Wendy Sherwood: ..... or Dr Daleen Casteleijn (RSA): +.....

CONFIDENTIALITY:
The fact that a focus group involves a group of participants in a verbal discussion means that although you will not be identified or referred to by your real name, it cannot be guaranteed that you will not be recognised by one or more of the other participants. You are required to select a private environment in which to participate so that the focus group is not seen or heard by anyone else. The safeguards implemented by the researcher are stated in 1.0 below. Participants in the focus group are required to sign a non-disclosure agreement (page 9) to protect participants' right to confidentiality.

Researcher statement of confidentiality
- All information obtained during the course of this study will be kept strictly confidential by the researcher.
- During the focus group, participants will be identified and referred to by code name, not their real names. Records of the identity of participants will only be accessible by me as the researcher.
- All hard copy (paper-based) information will be securely stored in a locked filing cabinet accessible only by the researcher.
- All written and recorded data will be stored in secured files.
- Audio-visual recordings will only be viewed and listened to for the purposes of this study and not for any other purposes.
- Audio-visual recordings will only be viewed and listened to by the researcher and will not be accessible by any other person(s).
- All the recordings will be password protected and as the sole researcher, only Wendy Sherwood will have access to the passwords and recordings
- Immediately after the recorded focus groups the recordings will be saved onto a computer file and labeled with an identification code number.
- Information will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- When the focus group recordings have been transcribed by the researcher (approximately 2 months after recordings are made), the recordings will be permanently deleted from the computer
- Data that may be reported in scientific journals will not include any information that identifies you as participating in this study

PARTICIPANT QUESTIONS*?:*
Did the participant raise any questions?
YES / NO **If YES** – What where they:

INFORMED CONSENT:

- I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled 'An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability'
- I have also received, read and understood the above written information (Participant Information Leaflet and Informed Consent) regarding the study.
- I am aware that an audio-visual visual recording will be made of my participation in the study, but that this involves my typed questions and comments and verbal participation only (I am not seen)
- I am aware that the results of the study, including personal details regarding my sex, age, initials will be anonymously processed into a study report.
- I may, at any stage, without prejudice, withdraw my consent and participation in the study.
- I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
    - I am aware that my consent to take part in this study will only be accepted when supported by my signed agreement of the Non-Disclosure Agreement (p9)

PARTICIPANT:

Printed Name	Signature	Date and Time

I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

WITNESS (If applicable)**:**

Printed Name	Signature	Date and Time

INFORMED CONSENT TO THE MAKING OF AUDIO-VISUAL-VISUAL RECORDINGS:

- I hereby confirm that I have been informed by the researcher, Wendy Sherwood about the nature, conduct, benefits and risks of the study entitled 'An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability'

I am aware that an audio-visual recording will be made of my participation in a focus group. The recording is integral to the Adobe Connect software being used to facilitate the focus group.

I am aware that:

- all data obtained during the course of this study will be kept strictly confidential by the researcher as stated in the Informed Consent form.
- all participants agree to non-disclosure of information in order to maintain confidentiality
- an audio-visual visual recording will be made of my participation in the study, but that this involves my typed questions and comments and verbal participation only (I am not seen)
- immediately after the focus group the audio-visual recording will be downloaded onto a computer file and labeled with an identification code number, not my name or participants' names.
- recordings will be stored securely on a personal computer requiring a password to access it; the computer files containing recordings will also be password protected. Passwords will only be known by the researcher who will have sole access to the computer and recordings
- recordings will not be kept on computer any longer than necessary, and will be dealt with in accordance with the UK Data Protection Act, and EU Data Privacy Law.
- when the audio-visual-visual recording has been transcribed by the researcher (approximately 2 months after recordings are made), the recording will be permanently deleted from the computer
- audio-visual-visual recordings will only be used for the purposes of this study and will not be used for any other purposes.
- audio-visual-visual recordings will only be listened to by the researcher and will not be accessible by any other person(s).
- I may, at any stage, without prejudice, withdraw my consent for audio-visual-visual recordings to be made and/or used in the study and/or withdraw my consent to participation in the study
- I have had sufficient opportunity to ask questions and (of my own free will) I give consent for audio-visual-visual recordings to be made of my participation in focus groups in this study.

PARTICIPANT:

Printed Name	Signature	Date and Time

I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

WITNESS (If applicable)**:**

Printed Name	Signature	Date and Time

Non Disclosure Agreement

I, _____ hereby agree to maintain the confidentiality of information disclosed during an online focus group/groups as part of participating in the study entitled 'An investigation into the theoretical construction of effort and maximum effort as a contribution to the theory of creative ability' or interview sessions

1) Definition - For purposes hereof, "Confidential Information" shall mean information or material obtained or observed while attending an online Focus Group session. Confidential Information includes
   a) any participant's identity or information that might reasonably allow identification of the person.
   b) any and all information relayed during the Focus Group including techniques, ideas, processes, discoveries and research.

2) I shall at all times hold in trust, keep confidential and not disclose to any third party or make any use of the Confidential Information.

3) I shall at all times hold in trust, keep confidential and not disclose to any third party or make any use of the identity or any participant involved in the Focus Group.

4) All notes, reference materials, memoranda, documentation and records in any way incorporating or reflecting any of the Confidential Information shall belong exclusively to the researcher and the undersigned agrees to destroy all copies of such materials in the undersigned's possession to the researcher upon request.

The undersigned agrees to the above terms of this agreement.

PARTICIPANT:

Printed Name	Signature	Date and Time

I, Wendy Sherwood herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.
THE RESEARCHER:

Printed Name	*Signature*	*Date and Time*

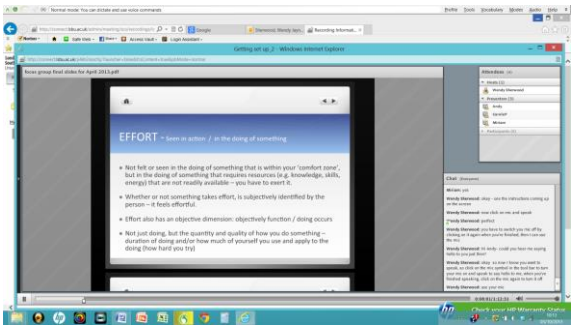
WITNESS (If applicable)**:**

Printed Name	Signature	Date and Time

Appendix L

Appendix L Sample of the guide for contributing to the focus group in writing

- for each bullet point on the next slide, there are symbols to select in the Table below



Not felt or seen in the doing of something that is within your 'comfort zone', but in the doing of something that requires resources (e.g., knowledge, skills, energy) that are not readily available – you have to exert it.	
Whether or not something takes effort, is subjectively identified by the person – it feels effortful.	
Effort also has an objective dimension: objectively function / doing occurs	
Not just doing, but the quantity and quality of how you do something – duration of doing and/or how much of yourself you use and apply to the doing (how hard you try)	

Qu: quantity and quality - does that fit? PAUSE

 Your comments:

PLAY

(participant given name) response  (delete the relevant thumb symbol). Your comments:

(participant given name)  Your comments:

(participant given name)  Your comments:

Appendix M

Appendix M Ethics approval letter

R14/49 Mrs Wendy Sherwood

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M110527

NAME: (Principal Investigator)	Mrs Wendy Sherwood
DEPARTMENT:	Department of Occupational Therapy Medical School
PROJECT TITLE:	An investigation into the theorectical construction of effort and maximum effort as a contribution to the theory of creative ability
DATE CONSIDERED:	27/05/2011
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Dr Daleen Casteleijn
APPROVED BY:	Professor AJ Wodiwiss, Deputy Chairperson, HREC (Medical)
DATE OF APPROVAL:	31/07/2011

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University.
I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated, from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**.

Principal Investigator Signature Date

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Appendix N

Appendix N Joanna Briggs Institute - Narrative, Opinion and Text Assessment and Review Instrument (JBI-Notari)

QARI data extraction instrument

JBI QARI Data Extraction Form for Interpretive & Critical Research

Reviewer _____ Date _____

Author _____ Year _____

Journal_____ Record Number _____

Study Description

Methodology

Method

Phenomena of interest

Setting

Geographical

Cultural

Participants

Data analysis

Authors Conclusions

Comments

Complete Yes ☐ No ☐