THE PERCEPTIONS OF OCCUPATIONAL PERFORMANCE PRIORITIES FOR ADOLESCENTS WITH LEARNING DIFFICULTIES

Loani Marx

A research report submitted to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements for the degree

of

Master of Science in Occupational Therapy

Johannesburg, 2017

DECLARATION

I, Loani Marx declare that this research report is my own work. It is being submitted for the degree of Master of Science in Occupational Therapy 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]

....6th.... day of .....November.....[month], 2017

DEDICATION

To my Heavenly Father who has provided me with the strength and ability to complete this degree and a passion and empathy for working with people with various challenges.

"Make a careful exploration of who you are and the work you have been given, and then sink yourself into that. Don't be impressed with yourself. Don't compare yourself with others. Each of you must take responsibility for doing the creative best you can with your own life."

Galatians 6: 4-5 (Message version)

To my parents, thank you for believing in me and for modelling a love for education. Without your constant emotional support I would not have been able to endure.

"As dit maklik was sou almal dit gedoen het..."

To my husband, thank you for your patience during the long hours of work, for your love and support throughout and for all the sacrifices that you had to make to enable me to complete this degree.

To my sister for her support, understanding and assistance throughout my studies.

To all the parents and adolescents who endure despite the adversity of learning difficulties – you are an encouragement to all of us.

ABSTRACT

Occupational therapy for adolescents with learning difficulties (LDs) is still a relatively undeveloped area of practice in contrast to paediatric services for younger populations. The purpose of the study was to explore the perceptions of adolescents with learning difficulties and their parents regarding their most important current and future occupational performance priorities (OPPs), current occupational difficulties as well as intervention and supports that have been helpful thus far. A descriptive, explorative, qualitative study design was utilised. Eighteen adolescents aged 13 – 21 years with LD and nine parents were interviewed or included in a focus group. Data was inductively coded and analysed, identifying three main themes. The main needs in terms of OPPs included understanding the adolescent perspective and developmental needs, occupational needs and preparing for the future. Occupational difficulties included developmentally-related difficulties, occupational difficulties and intervention-related difficulties. Current and previous effective support and interventions as reported by the participants entailed support and mentoring, direct interventions and the promotion of self-determination. Recommendations for implementing occupation-based practice for this population are made.

ACKNOWLEDGEMENTS

I would like to thank my university supervisors Mrs. D. Franszen and Mrs. M. van Niekerk for their many hours of reviewing and valuable guidance and input throughout this project.

Thanks to the Faculty of Health Sciences, University of the Witwatersrand, Johannesburg for financial assistance provided.

I would also like to thank my parents for their financial support throughout my studies.

My gratitude to the Gauteng Department of Education, the District offices, the Principals and School Governing Bodies of School of Achievement and Muriel Brand School for permission to conduct this research project within their schools.

A big thank you to the therapists and other staff at the schools for assisting with logistic arrangements, recruitment of participants and collection of consent forms: Mrs. R van Lingen, Ms. F. Sinnett, Ms. L. Jupp, Mrs. C. Trenwith and Mrs. I. Richter.

Thanks to Mrs. E. Brettenny for allowing and assisting with data collection at her private practice.

A big thank you to the parents and adolescents who provided me with their time for participation in the interviews and focus groups as well as a willingness to share their experiences with me.

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NOMENCLATURE

Operational Definitions

Learning difficulty (LD)	"Learning difficulty" or "learning disability" is a broad term referring to a heterogeneous group of people with a difficulty with acquiring literacy skills like reading, writing, spelling and doing mathematics[1p.77,82-3]. In this study the definition also includes other aspects such as difficulties with attention, memory, language, central processing, organisation, social skills and executive functions as proposed by some definitions, but not an inadequate or delayed ability to memorise information or learn new skills as caused by intellectual disabilities[1-4].
Specific learning disorder (SLD)	The more specific term used by the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5)[5] for the category of LDs that are not due to intellectual impairment. This category of disorders is also defined in terms of a significant discrepancy between a child or adolescent's proposed abilities and actual achievement[2, 6]. Exclusion criteria state that the SLD is not due to inadequate opportunity to learn the skills, the effects of sensory impairments or due to adverse socio-economic circumstances[3, 5, 7]. Dyslexia, dysgraphia and dyscalculia are terms that are used to describe various groups of SLDs[3].
Attention Deficit Hyperactivity Disorder (ADHD)	ADHD is a sustained pattern of inattention, impulsivity and hyperactivity that causes significant impairment in various areas of occupation. These symptoms are in excess of the effects caused by another medical condition or other neurological dysfunction[5, 8, 9].

Occupation	"An occupation is a specific individual's personally constructed non-repeatable experience. That is, an occupation is a subjective event in perceived temporal, spatial and sociocultural conditions that are unique to that one-time occurrence."[10p139]
Activity	"An activity is a culturally defined and general class of human actions. An activity is an idea held in the minds of persons and in their shared cultural language."[10p139]
Occupational Performance Priorities (OPPs)	The occupations that are perceived by an individual or family as their priorities for ensuring satisfactory occupational performance and that are the most important occupations needing intervention[11].
Productivity	"Productivity extends beyond work to include the goal-focused dimension of all occupations. It often yields great personal satisfaction."[12p253] Definition for research participants: Productivity describes the things we do to get to a goal. School work is often part of teenagers' "work" as a job is for adults. It is not only school work, but also other things or activities that you do with a specific goal in mind like building or making something.
Pleasure	"Pleasure is nearly the opposite of goal-focused productivity. Pleasure is process-focused. Pleasure is the degree of enjoyment a person experiences in an occupation."[12p253] Definition for research participants: Pleasure is the things that you do because you enjoy them. You might do these activities just for the sake of doing them and not necessarily to achieve something. It is simply things that are fun to do.

Restoration	"Restoration is the subjective aspect of occupational experience that restores our energy levels and ability to continue to engage in our daily lives."[12p253] Definition for research participants: Restoration is a name for the things you do to help you to get energy for all the other things that you want to and have to do. It is also all the things that you do to clean up and keep things in order at home or somewhere else as well as managing your life.
Learners with Special Educational Needs (LSEN)	Learners with disabilities and impairments or learners with barriers to learning that require Special Needs Education.[13]

Abbreviations

LD	Learning Difficulty
ADHD	Attention Deficit and Hyperactivity Disorder
SLD	Specific Learning Disorder
OPP	Occupational Performance Priority
DSM 5	Diagnostic and Statistical Manual of Mental Disorders 5th edition
LSEN	Learners with Special Educational Needs
ADL	Activities of Daily Living
PADL	Personal Activities of Daily Living
IADL	Instrumental Activities of Daily Living

CHAPTER 1 INTRODUCTION AND BACKGROUND TO STUDY

1.1 Introduction

Addressing the needs of children with Attention Deficit and Hyperactivity Disorder (ADHD) and Specific Learning Disorders (SLDs), who often present with developmental delays, is well-established and represents one of the most popular areas of practice amongst occupational therapists in South Africa[14]. The deficits and problems seen in children with ADHD and SLDs tend to persist into adolescence and adulthood for a fair number of clients[15, 16]. The occupational performance challenges they face however present differently due to the changing occupations that adolescent development demands[17-19].

Occupational therapy for adolescents in general, including those with learning difficulties (LDs), is however not a well-established area of practice[20]. It is an area that needs to be seriously considered by South African occupational therapists due to the occupational performance challenges facing adolescents with LDs as it appears that in South Africa occupational therapy intervention does not follow through from childhood to adolescence in the field of LDs. This may be because occupational therapy along with psychiatry and psychology for adolescents is still an emerging field which was initially neglected while researchers and scientists focused on children and adults[21, 22]. Fouché[21] states that intervention with adolescents was initially limited due to a lack of resources and that adolescents were, and in some cases are still, treated either with children or adults in health care settings. This did not and does not take into consideration that adolescents have specific needs that are different from both children and adults[21].

Research indicates that all adolescents with disabilities including those with LDs want to achieve in terms of their education, employment, social participation and belonging[23]. Services, including occupational therapy, should therefore be all-encompassing and address these areas of occupation amongst others and incorporate adolescents' goals into interventions offered[23-25]. For occupational therapy to reflect the profession's values of occupation-based practice, intervention should address occupations such as work, leisure

and social participation as well as pre-occupational components such as psychosocial components[17, 26-28].

Occupational therapy for adolescents with LDs should therefore focus on the whole range of adolescent occupations and occupational performance taking into consideration their neurological and occupational development (which is different from both children and adults) to deliver services that are occupation-based and client-centred. Focusing on adolescents with LDs' occupational performance priorities (OPPs) when planning occupational therapy respects their autonomy and ability to determine their own goals as well as life choices which are the main tenets of the client-centred approach[28-30]. Consequently they are made active participants in the therapy process and power is relinquished by the therapist for solely determining goals and directing intervention[30]. By following this approach to intervention occupation-based practice is the method by which occupational therapists uniquely implement a client-centred approach[30]. Disregarding these clients' perspectives about their OPPs would mean that the therapist takes charge of goal-setting and disregards the unique role that occupational therapists have to support clients who are capable, as adolescents with LDs are, to construct their own meaningful occupational pattern as pointed out by Pierce[12, 30].

There is limited research available on the topic of occupational therapy with adolescents with LDs informing evidence-informed practice. Therefore research to provide evidence for occupational therapy with these clients, is needed[31, 32]. Studies, which consider the perspectives of the stakeholders involved, especially adolescents and their parents to guide client-centred practice with regard to occupational therapy programs, could be useful in providing a basis for the development of meaningful, suitable and effective intervention[33-35].

1.2 Problem statement

Occupational therapy services to children with LDs do not follow through from childhood to adolescence to address continued and changing difficulties with valued occupations. Intervention for adolescents with LDs often does not take into account the adolescents and their parents' perceptions regarding their occupational performance priorities (OPPs). Consequently current intervention practices are not reflecting the profession's core value of client-centeredness[33, 34].

Literature indicates that occupational therapy practitioners should collaborate with clients taking into consideration their priorities in terms of their occupational performance and subjective experience of occupations or otherwise stated, their lived experience[12, 28, 33, 36]. In the case of adolescents with LDs and their parents their OPPs need to be considered during goal-setting and intervention planning, but there is little research on their specific occupational needs and no evidence regarding intervention effectiveness to guide practice with this population. Currently a popular approach taken in treating children with LDs in occupational therapy is a bottom up approach focusing on deficits in client factors and performance skills including sensory processing and motor skills[37-39]. It is not clear whether occupational therapy for adolescents with LDs should continue from this bottom up approach or whether their overall occupational performance goals should be considered in a top down or compensatory approach. Consequently research is needed to assist occupational therapists in understanding adolescents with LDs' major OPPs and to also serve as a starting point for further research to generate evidence for guidance and decision making for occupational therapists in clinical settings where these clients are encountered.

1.3 Research question

What are the perceptions of adolescents with LDs and their parents regarding their occupational performance priorities (OPPs) and current or past interventions that influenced occupational performance?

1.4 Purpose of the study

The purpose of the study was to explore the perceptions of adolescents with LDs and that of their parents regarding priorities in occupational performance that need to be addressed in occupational therapy intervention. This study therefore used a qualitative approach to obtain information from both adolescents with LDs and their parents in relation to the value that they place on aspects of occupational performance in terms of their current and future goals as well as perceptions regarding current and previous interventions that influenced occupational performance. This knowledge of the OPPs most often perceived as important for adolescents with LDs is to be utilised in making intervention more occupation-focused and to provide some evidence to assist therapists in clinical decision making in the absence of other sources of literature.

1.5 Aims of the study

The aim of the study was to explore the perceptions of adolescents and their parents regarding OPPs that should be addressed in occupational therapy for adolescents with LDs to address their participation in different areas of occupation as well as perceptions regarding current and previous interventions that influenced occupational performance.

1.6 Objectives of the study

- To explore adolescents with LDs and their parents' perceptions about their current and future priorities for their participation in different areas of occupational performance, noting their differences and similarities;
- To describe the perceptions of adolescents with LDs and their parents regarding the adolescents' difficulties with current occupations.
- To describe the perceptions of adolescents with LDs and their parents regarding the supports and interventions that have been effective in helping to improve occupational performance thus far.

1.7 Justification of the study

At present occupational therapy offers very few options for adolescents in South Africa for intervention for continued occupational performance difficulties due to LDs. The available intervention seldom considers their long term occupational performance goals in terms of education, work and leisure as therapists are more concerned with addressing the motor and psychosocial domain[40]. In order to address the previously described shortfalls of often not utilising an occupation-based approach and having inadequate evidence to guide practice for intervention for adolescents with LDs, the perceptions of both the adolescents and their parents need to be considered, so that realistic and congruent intervention outcomes can be determined. Information gained from adolescents with LDs and their parents about their future needs in relation to occupational performance goals obtained in this study will be the initial step needed to guide the design of occupational therapy programs for adolescents with LDs to support the implementation of meaningful and effective intervention, assisting in determining the approach and goals to be focused on. It will also serve as a foundation for further research on the effectiveness of occupation-based and client-centred approaches with adolescents with LDs. The information from this study is important as it may be used by occupational therapists working with adolescents with LDs to

improve evidence-informed practice and to implement services that are occupation-based and client-centred in addressing the occupational performance impairments of these clients.

1.8 Outline of Study

Chapter 1 Introduction

The introduction provides information regarding the background of the study, the problem statement and research question. The purpose of the study is then stated followed by the study's aim and objectives. Lastly the justification of the study is described as well as the clinical implications of the study's results.

Chapter 2 Literature review

A review of the current available literature regarding adolescents with learning difficulties was undertaken and is described in chapter two. A review of adolescents' occupations and adolescent development is described, followed by a review of the current available evidence to guide occupational therapy practice.

Chapter 3 Methodology

Chapter three contains the details of the methodology that was followed during the data collection and data analysis processes which included interviews and focus groups followed by qualitative content analysis and the listing of the occupational performance priorities identified by the participants.

Chapter 4 Results

The results of the study are described in Chapter 4. This contains two parts, namely tables with the most selected occupations as well as the themes, categories etc. identified from the inductive analysis.

Chapter 5 Discussion

A discussion of the results is undertaken in Chapter 5 with references to relevant literature.

Chapter 6 Conclusion

Chapter 6 contains the conclusion and future recommendations of the study.

CHAPTER 2 REVIEW OF LITERATURE

2.1 Introduction

This chapter will address current available literature regarding occupational therapy intervention for adolescents with LDs as well as some background theoretical information that supports this area of practice. Due to the limited occupational therapy-specific literature that was found, a broader variety of literature sources were consulted including information from developmental psychology, neurophysiology, education and other relevant sources. The information will be presented in the following order: First information regarding the model of Occupation by Design will be presented as a theoretical construct from which the occupations and occupational development of adolescents could be better framed and viewed from an occupational perspective. The model was employed to maintain an occupation-centred focus during the review of the variety of literature from sources outside of occupational therapy and occupational science due to the limited field-specific literature found. Secondly, the normal developmental patterns of adolescents and the influence of LDs on each aspect of their occupational development including person, context and occupation will be considered. Thirdly, the evidence for the currently available intervention to guide occupational therapy practice for adolescents with LDs will be reviewed. Fourthly, some attention will also be given to occupation-based, client-centred and evidence-informed practice for intervention for adolescents with LDs. Finally, the gaps in literature will be highlighted in order to justify the current study.

2.2 Occupation by Design Model

According to Pierce[12, 41] occupational therapists design interventions that are powerful in bringing about change in functional or occupational outcomes. To be valued as a professional by other professions and the wider community, evidence of the efficacy of "therapeutic power"[12p252], i.e. to use occupation effectively in practice to bring about change in clients, is needed, especially in terms of improvement of the valued functional outcomes. Proof of therapeutic power is necessary to establish and maintain occupational therapy services in new and developing areas of practice such as occupational therapy services for

adolescents with learning difficulties (LDs) specifically specific learning disorders (SLDs) and attention deficit and hyperactivity disorder (ADHD)[12, 17, 20, 31, 32, 34].

A model proposed by Pierce, the Occupation by Design model, provides three constructs for clinical reasoning when planning occupational therapy intervention for clients and may be applied to adolescents with LDs. These constructs are Appeal, Intactness and Accuracy, all of which are related to therapeutic power (Figure 2.1). This model was chosen due to its central focus on occupations, but specifically as it contains constructs considering the clients' subjective or lived experience of occupations including the meaning they give to their occupations, thus incorporating a client-centred approach[12]. This was thought to be useful in attempting to understand adolescents with LDs and their parents' perspectives on their OPPs.

Appeal focuses on the adolescent's subjective experience and meaning given to occupation with the right blend and balance of productive, pleasurable and restorative occupations. The construct Intactness ensures that the contexts are taken into consideration in terms of the spatial, temporal and sociocultural aspects to make the designed intervention fit in with the adolescent's natural settings where their occupations take place. Lastly the construct Accuracy assists in designing interventions skilfully, to achieve goals that have been established in conjunction with the adolescent and family with precision in order to demonstrate an effective and powerful therapeutic effect. The application of these concepts guide the achievement of therapeutic power and the implementing of best practice for occupational therapy[12, 41].

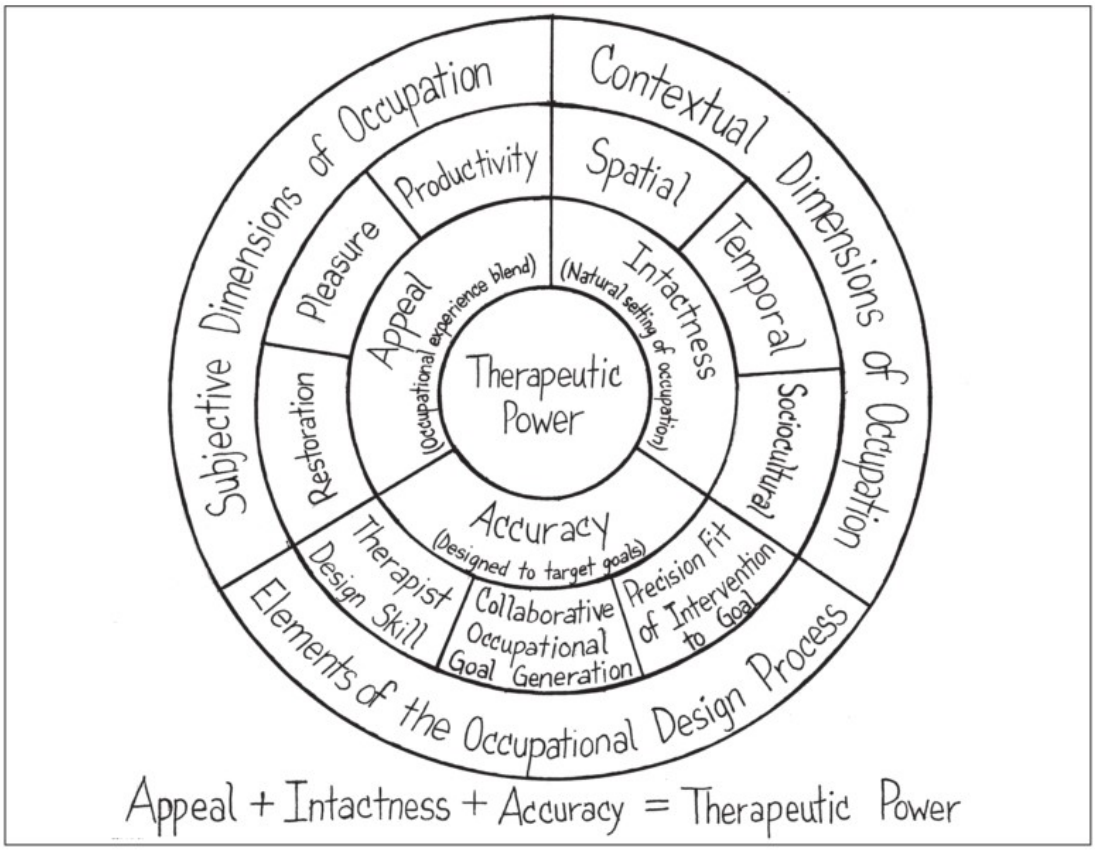

Figure 2.1: Occupation by Design Model by Pierce[12p.252]

The term "best practice" describes the most recent knowledge and ideas that serve as guidelines to support the design of the best possible intervention for a specific client or population, thus promoting therapeutic power or effective intervention[17, 41]. Pierce[41] and Law[17] state that best practice in occupational therapy is occupation-based, client-centred and evidence-based. Pierce[41] further explains that each of these approaches provides a different set of values by which good practice is defined.

For occupational therapists planning services for adolescents with LDs there is a variety of literature both within the profession and from other professions that may inform practitioners regarding best practice. Due to limited good quality research studies within the

field of occupational therapy other sources of information needs to be consulted to inform new and developing areas of occupational therapy practice. In order to remain true to the profession's philosophy and value of occupation in this field of practice, information from bodies of knowledge from outside the profession need to be viewed from an occupational perspective. This knowledge is then combined with the preliminary research and philosophy within the occupational therapy and occupational science disciplines and then applied to practice by being translated into best practice guidelines which, according to Pierce[42 p.763] is most often occupation-based [12, 17, 26, 30].

In the following review of the current available literature, information is presented to inform best practice for occupational therapy with adolescents with LDs. Occupations and occupational development of adolescents along with the influence of LDs on these will be discussed as well as the current available evidence regarding intervention for adolescents with LDs.

2.3 Occupation-based practice for adolescents with learning difficulties

In order to provide authentic occupational therapy for adolescents with LDs, occupational therapists should focus on the occupations that are unique to the adolescents' developmental phase and that are influenced by their pathology[43]. For adolescents and their families to benefit from the unique view of health and participation that the profession offers, occupational therapists need a thorough understanding of normal adolescents' occupations and the process of occupational development in this life stage[20]. Intervention planning should then focus on the occupations that are influenced by activity limitations and participation restrictions which need attention in order to enable occupational performance[17, 30].

Occupational development is a term that has been used to describe the development of occupations and changes in occupational performance across the life span[18, 44]. A wealth of literature is available to describe the internal changes or changes in client factors and performance skills that a person undergoes in developing from childhood into adulthood, but literature on how occupations develop remains scant. Occupational development is thus still an emerging field, although it is of particular concern to occupational therapists because the profession aims to understand and provide intervention to facilitate occupational performance in their clients[44]. Occupational development, like occupational performance, incorporates an ecological perspective and considers the person, contextual and occupation or task factors when attempting to understand how occupations develop and change across the life span[17, 28, 44].

Based on the concept of occupational development, the occupations of adolescents are different from those of both children and adults. Greater independence affords adolescents a greater variety of occupations in which they can engage compared to children but the full range of adult occupations are not yet available to them because they are not yet fully independent. Many adult occupations are introduced to adolescents for the first time in preparation for taking on adult roles. Greater responsibility is also given to adolescents in a variety of their occupations and due to the development and refinement of cognitive and motor skills they are able to perform these occupations without many of the safety concerns applicable to younger children[18-20, 45]. Taking into account that the phase of occupational development and occupational patterns of adolescents are different from those of children and adults, occupational development and occupational patterns will differ in adolescents with LDs including SLDs and ADHD from those experienced by children and adults with the same conditions.

Learning difficulties (LDs) have now been shown to have a negative impact on the normal occupational development of adolescents and their attainment of the life tasks associated

with this developmental period[9, 46-48]. In the past SLDs and ADHD were regarded as conditions that were outgrown, resulting in a lessening impact on adolescent and adult functioning. Recent literature is starting to show the contrary. The impact of LDs is reported to persist into the high school and college years for a significant number of learners [7, 15, 49] but sources differ on the extent to which ADHD is reported to persist into adulthood. Sadock and Sadock[16] reported that ADHD persists into adulthood in about 15 – 20% with figures as high as 60 – 63% of adults diagnosed in childhood reported by Barkley *et al.*[50]. Thus both these clusters of conditions are reported to have mild to significant continued functional implications into adolescence and adulthood[7, 49, 51-54]. Addressing the dysfunction in occupational development that persists into adolescence is therefore an important consideration in occupational therapy. Furthermore, the intervention for adolescents should be different from the intervention for children and adults[20] including adolescents with LDs, due to possible different functional influences related to the change in occupations in adolescence[18, 19].

In the next section the occupations of adolescents with LDs will be reviewed in terms of personal, contextual and occupational or task-related factors. The normal developmental patterns of adolescents will first be discussed and then the influence of LDs on each aspect of their occupational development.

2.3.1 Person factors

Person factors are inherent characteristics, skills and abilities of a person that influence how they engage in their everyday occupations[17, 28]. One of the most important person factors to consider when planning services for adolescents with learning difficulties is the influence of the life phase they have reached, as adolescence has been recognised to be a time of significant change and development [22, 55]. The adolescent undergoes changes in preparation for adulthood and its associated roles[22, 55].

The age range of adolescence varies amongst sources, but is generally considered between 11 and 21 years[22, 55, 56]. Literature describes physical, sexual, cognitive, emotional, psychological and social changes as part of adolescence as a transition period[20, 22, 55]. Puberty plays a significant role in facilitating some of the changes that occur in adolescence[22, 55, 57, 58] and many of the other changes may follow as a consequence of how an adolescent views the changes brought about by puberty.

Fluctuations in mood are common during adolescence. Increased levels of sex hormones, brought on by puberty, influence mood and behaviour. The adolescent's body image and feelings about themselves are influenced by the rapid physical changes and appearance of secondary sexual characteristics. Adolescents are often lethargic due to the increased energy required for the physical changes, consequently daily patterns of arousal levels change from childhood [20, 22, 55, 59].

Patterns of arousal are also further influenced by a change in sleep patterns. Another effect of the increased sex hormones during puberty is a delay in the secretion of a different hormone, Melatonin, at night which influences sleep patterns especially in later adolescence. The result is that adolescents only feel tired later and want to go to bed later[55 - 57]. Although it is then often assumed that adolescents now need less sleep than in childhood due to later sleep onset, Carskadon[60] states that their need for sleep in fact increases with an estimated eight and a half to nine and a half hours being the optimal amount of sleep per night. This may contribute to a change in energy and arousal levels as many adolescents are reported to be sleep deprived due to the mismatch between societal norms for waking up and the biologically-mediated delayed sleep onset times of adolescence[59 , 60, 61].

Recent literature explores the effects of pubertal maturation vs. age-related changes on brain development in adolescents. These studies hypothesise that puberty has a direct

impact on the neural changes that take place during adolescence[57, 58]. Knowledge of the neurological changes taking place during adolescence is useful for amongst others occupational therapists, educators, parents and policy makers to provide insight into the behaviour and cognitive abilities of adolescents which in turn also greatly influence their occupational performance[62, 63].

Studies reporting the specific neurological changes mention myelinisation, proliferation and pruning of synapses of particularly the frontal and prefrontal cortices as some of the main changes[62]. Refinement of parietal regions was also reported[64] as well as a general increase in connections to the whole brain[65]. These neuro-maturational processes provide the foundation for cognitive, emotional and motivational development to take place in the adolescent.

Cognitive skills that develop and result in increased cognitive capacity and behavioural changes during adolescence include abstract thinking[56, 65], deductive reasoning [22, 56], selective and divided attention[56] as well as attentional control[66], working and long term memory[28, 56], processing speed, problem solving[56, 65], cognitive flexibility[66], mentalising and theory of mind[67, 68] and ideational praxis[64]. Many of these skills fit into the category of executive functions.

Executive function is generally described as the directing and control of cognitive and emotional faculties and adolescence are reported to be critical in the development of these functions[62, 66, 69]. Adolescents are increasingly able to think about their own thinking processes, direct these processes as well as evaluate it[56, 65, 66], set goals and display goal-directed behaviour to achieve these goals[66, 70].

Casey, Getz & Galvan[70] found that neurologically the limbic reward system develops more rapidly in an adolescent's brain than the top-down control system, predisposing adolescents

to sensation seeking and an interest in activities that include an element of risk-taking[58] as well as poor impulse control. Blakemore & Robbins[71] also reported this differential development and related it to the greater influence of emotion and social factors on decision making in adolescents. In addition, their patterns of social interaction change and interest in interacting with peers and possible romantic partners increase while they have less interest in spending time with their parents at home [22, 58, 62].

Adolescents' motivational processes are described as changing from being explorative to aiming to achieve competence. This is often visible through an increased interest in activities that develop craftsmanship and sportsmanship. This is different from children's motivational processes which are directed towards exploration and adults' motivation that is usually directed towards achievement especially in terms of their careers [18, 72].

Although adolescence is regarded as a time where other important sensitive or critical periods of sensory and motor brain development have passed, studies have reported that the neuroplasticity of the brain makes it well capable of life-long learning and associated neurological adaptation past these sensitive periods[63, 73, 74]. Blakemore and Choudhury[62] as well as Blakemore and Frith [63] do however hypothesise that the neuro-maturational changes observed during adolescence represent a sensitive period for the development of social and higher cognitive or executive functioning.

Any LD is regarded as an intrinsic factor (or set of weaknesses) and thus may also be considered as a person factor, influencing an adolescent's school achievement and occupational performance[1, 5, 8]. The definition of LD has long been controversial and various terms such as learning disability, learning disorder and learning difficulty are used interchangeably in both literature and clinical practice. There are also various definitions for

some of the commonly used terms, especially when comparing literature from various countries. This has been the cause of much confusion[1, 75, 76].

Learning difficulty is a broad term referring to a heterogeneous group of people who find acquiring literacy skills like reading, writing, spelling and doing mathematics difficult[1]. Some definitions include other aspects such as difficulties with attention, memory, language, central processing, organisation, social skills and executive functions[1-4]. The UK includes intellectual impairment in their definition of learning disability while other countries' definitions like the USA exclude it[75-77]. Specific learning disorder (SLD) is the more recent, precise term used by the Diagnostic and Statistical Manual of Mental Disorders 5th edition (DSM-5)[5] for the category of LDs that are not due to intellectual impairment. Likewise, the term "specific learning difficulty" occurs in literature where it is attributed with the same meaning[3, 78]. This category of disorders is also defined in terms of a significant discrepancy between a child or adolescent's proposed abilities and actual achievement[2, 6]. Having stated this, mention needs to be made of the aptitude-achievement discrepancy on psychometric tests that was initially used to identify SLDs that has recently been discredited and alternative methods for identification are being researched[79]. Dyslexia, dysgraphia and dyscalculia are terms that are used to describe various groups of SLDs[3]. Exclusion criteria state that the SLD is not due to inadequate opportunity to learn the skills, the effects of sensory impairments or due to adverse socio-economic circumstances[3, 5, 7].

Attention deficit and hyperactivity disorder (ADHD) is regarded by some as a type of learning disability or LD although not a SLD, but the two are often co-morbid[8, 80]. Some literature group these disorders with other disorders like language disorders and autism spectrum disorders under the broader term "developmental disorders"[3]. The sustained pattern of inattention, impulsivity and hyperactivity in ADHD causes significant impairment in various areas of occupation. These symptoms are in excess of the effects caused by another medical condition or other neurological dysfunction[5, 8, 9].

A recent view attributes LDs to inadequate functioning of more complex developmental pathways[81-84]. Research indicates that the presence of LDs and ADHD adversely influence the attainment of developmentally linked skills and the performance of life tasks of each developmental phase[7, 51-54]. Cognitive development is the main area affected, which includes attention, inhibition, working memory and especially higher order processing functions or executive functions. These functions are related to neurodevelopment of especially the frontal areas of the brain. Adolescents with ADHD often are also reported to struggle with the skills that are needed for satisfactory social participation[9, 52] supporting the theory that ADHD and LDs represent clusters of executive dysfunction[4, 69, 82, 85]. If adolescence is a critical or sensitive period for the development of social skills and executive functions, intervention focusing on the development of these skills is crucial for adolescents with ADHD and LDs.

During adolescence, the environment plays a moderating role and facilitates development resulting from these neurological changes[63]. Adolescents express their desire to become independent and competent contributing to the formation of their identity in the variety of occupations, in their specific environment. This affords them the opportunity to translate the biological and neurological changes accompanying adolescence into the improved skills reported by human development literature[18]. Consequently environment plays an important role not only in the developmental process but also in occupational performance. Therefore it is important to consider the specific environment of adolescents when planning occupational therapy intervention[17].

The knowledge of adolescents' environment and neurological changes during adolescence, allow occupational therapists to understand how adolescents relate to their environment through the occupations in which they engage. This has significant implications for the planning and choice of a remediative, habilitative or compensatory approach or frame of reference in occupational therapy[20, 63].

2.3.2 Contextual or environmental factors

There are two major factors that contribute to the changes that occur in terms of context in adolescence. Firstly, adolescents are more independent than children due to needing less supervision for managing their basic safety[45]. Secondly, along with the greater independence they are also given more responsibility and greater freedom[19, 45].

Adolescents still have more free time available to them than adults, but the time demands of productive occupations like school work and chores increase. They have greater freedom to choose what they do with the free time available to them, because their routines are less regulated by other people like parents and teachers[19, 45].

Increased demands to manage more complicated schedules with less external regulation from school staff may challenge the adolescent's organisation skills. Responsibility for scheduling and completing homework, studying for tests and doing assignments are increasingly left to the adolescent. Caregivers and teachers regard them as capable of managing the student role with increasing independence[19, 45].

More freedom to move around their community independently become possible as they have the ability to negotiate community transport on their own and older adolescents become eligible to obtain a driver's permit or licence[45]. This affords them greater exposure to various community environments and brings about more varied contexts where occupations or activities may take place. Although adolescents have greater independence, they are still dependent on their parents for some aspects of transport and the cost of either private or community transport. Influenced by the greater independence, freedom and responsibility, there are further contextual or environmental aspects that influence the occupational performance of adolescents and Pierce[12] in the Occupational Design Model categorises these in terms of the temporal, spatial and sociocultural aspects of context.

Temporal aspects of context

Temporal factors of context may include aspects such as a person's life phase or phase of development, circadian rhythm as well as routines or recurrent daily, weekly, monthly and yearly patterns and are synthesised into an occupational pattern. The balance of work, play and rest is also very much connected to time use and becomes more important as an adolescent learns to manage their own balance of activities[19, 86].

The unique life and developmental phase of adolescence forms part of what makes the adolescent's temporal context unique compared to children and adults. The circadian rhythm, which is the most basic cycle of temporality, leading people to mostly construct their sleep-wake cycles around the light-dark cycles of their environment and consequently providing a basic structure to their daily routines. Adolescents' circadian rhythm undergoes changes with the delayed sleep phase in later adolescence. Both their scheduling of sleep time and consequent pattern of energy and arousal levels will in turn influence how they organise the other activities in their occupational pattern. Thus they may be inclined to schedule more activities later at night and less activities early in the morning in order to sleep later which will consequently influence other routines[59 , 60, 61, 87]. Some schools in the USA have changed school starting times to commence later, with reported positive results on increased sleep time and decreased adverse effects of sleep deprivation on other occupations[60, 61, 87].

Spatial aspects of context

According to the Occupational Design Model three major factors play a role in the spatial aspects of the adolescent's environment, namely a person's experience of their body within their physical space ("embodiedness"[12p254]), their meaningful objects and the properties of their lived spaces or physical environments where occupations take place[12]. The objects in an adolescent's environment that are used on a daily basis and enable various activities, are

given meaning by the adolescent for various reasons, including social or cultural meaning, creating what Pierce refers to as "material culture"[12p254]. The properties of various spaces, which includes the sensory qualities and safety attributes, greatly influence the person and the occupations that are carried out in an environment. Routines are inevitably mapped over the environments in which they take place, providing needed cues and familiar structure in order to automatise routines in favour of speed and minimisation of physical and mental effort[12].

Embodiedness

Adolescents' embodiedness will be influenced by the physical changes brought about by puberty. As previously discussed the physical changes influence adolescents' body image and consequently how they experience themselves within their physical surroundings[20, 22, 55]. This experience of themselves and a greater awareness of the self within their environment may influence how they engage not only with the social environment but also their choosing to engage in activities requiring motor skills like sport activities.

Material culture

Adolescents may increasingly place greater value on material things, especially pertaining to clothes of specific brands and technology like cell phones. This is augmented by the development of abstract thinking, thus, objects may also be assigned greater symbolic meaning. This emerging materialism or material culture becomes a means of expressing their identity as well as gaining acceptance by their peer group[20, 22].

Properties of physical environments

Henry *et al.*[59] expand on the concept of the physical properties of the environment described by Pierce[12] in terms of the sensory properties of different physical environments.

Physical environments influence adolescents' participation in the whole range of adolescent occupations – from studying and attending classes to socialising with peers and relaxing or sleeping. A variety of authors also describe how certain sensory properties of the environment may be crafted in terms of their sensory properties and utilised to improve an individual's occupational performance by influencing arousal levels[59, 88, 89].

Technology in itself although regarded as physical objects, opens a whole different dimension for interaction and influence via a virtual context[28, 45]. This represents a more abstract space for a variety of social, pleasure and productive occupations, but also influences adolescents' occupational performance on a physical level e.g. the blue light emitted from screens influence sleep and arousal patterns and consequently also the quality of sleep[87]. Technology may also present a constant distraction in the environment influencing engagement and quality of performance in all other occupations[87, 90].

Specific changes in spatial environments in adolescence

A few significant changes take place in terms of the adolescents' specific spatial contexts or environments. Transferring to a new educational institution is usually one of the major changes in terms of context. Adolescents usually transition to high school during the early phase of adolescence and in the later phase they prepare to either enter the workplace or continue to post-secondary and tertiary education[19]. The home environment does not necessarily undergo such significant changes but adolescents spend increasingly more time outside the home and their greater independence in utilising transport gives them greater access to a variety of community-based spaces[17].

Sociocultural aspects of context

Sociocultural contextual factors' contribution as a facilitator or barrier in occupational performance and development must not be underestimated. Culture and the social interactions with their family, peers, educators and the greater community play a significant

part in the course of adolescents' development and the occupations available to them[12, 17, 22, 44].

Cultural and religious practices often have embedded rites and traditions related to adolescence as a means of preparing and initiating adolescents into adulthood. These practices may serve the purpose of socialising and teaching adolescents about a culture or religion as well as contributing to their moral development. A unique set of activities or occupations are the result of these rites and traditions contributing to the identity formation and value clarification of adolescents. While these rites and traditions aim to encourage greater participation and belonging, adolescents may also start to question the cultural and religious practices of their parents as part of clarifying their own values and this may lead to exploration of alternative religions and cultures[22]. Erikson[91] states that a psychosocial moratorium – a time for finding themselves and their adult roles – are provided to adolescents by society. During this time it is deemed acceptable for adolescents to experiment with different social behaviours and roles which is important for the formation of an adolescent's identity[22]. All these relationships may also contribute to further occupational development[92].

This process of experimentation takes place in the context of adolescents' relationships as adolescents' interactions with the significant people in their lives undergo changes.

Adult relationships

While parents, educators and other adults are important in terms of the guidance and the setting of appropriate boundaries as well as providing role models for societal norms and appropriate behaviour, adolescents usually draw themselves away from their parents and family and start spending more time away from home. This is part of the developmental task of an adolescent to form their own identity. Research however reports that spending

less time together should not be equated with adolescents placing less value on the closeness of family relationships[92, 93].

Their interactions with adults in general including parents, educators and other authority figures tend to become more discordant during this period due to a variety of developmental processes taking place including adolescents' cognitive and emotional development[92, 93]. Firstly, their ongoing need for greater independence may cause strife in relation to boundaries set for them. Secondly, the development of abstract thought and reasoning abilities causes increased arguments and debates over rules, ideas, etc. Thirdly, the process of value clarification results in the questioning of parents' and other adults' values and may result in values that are different from their parents and educators, another possible source of conflict. Fourthly, increased lability of emotions and difficulty regulating emotions are characteristic of this phase and is another factor that contributes to conflict in relationships. Lastly, adolescents tend to be egocentric, probably due to the process of establishing their own identity, but this too may cause greater conflict with adults[20, 22, 55].

Spending more time within their community and possibly in the work place affords greater opportunities to interact with adults outside of their families increasing interactions with other adults along with exploring roles like being a citizen of the country and a member of religious and other organisations. Adolescents may enjoy thinking and debating about social and political issues and formulate possible solutions for problems in their communities and in society in general. Louw *et al.*[22] does however caution that adolescents tend to be very idealistic in their thinking on how systems should work, and may at times lose touch with reality, having little experience of the difficulties involved in translating ideas into practice[20, 22].

Peer relationships

Peer interactions become a greater priority to adolescents as they spend less time with their family. The patterns of engagement start out with mainly same-sex friends in early adolescence with some interactions between male and female groups, affording adolescents opportunity to interact with peers of the opposite sex within the security of their same-gender groups. It then progresses to mixed gender groups and later to mixed gender groups with some time spent as couples alone (incorporating romantic relationships into friendship interactions). Friendships are increasingly viewed as intimate and loyalty is valued. Peer pressure may serve the function of helping an adolescent conform to social norms, but when used negatively may result in the engagement in risk behaviours[20, 22, 92, 93].

Friends and peers may provide a safe environment for practicing social and sexual behaviours and the sharing of information especially regarding the subject of sexuality. Friendships also provide the means to fulfil needs for entertainment, comradeship, loyalty and self-disclosure while emerging romantic relationships provide the opportunity for exploration of behaviours in preparation for finding a life partner[20, 22, 93]. Romantic relationships, including dating, are new types of interactions for adolescents. At first these relationships are based on common interests and activities and later on comradeship and intimacy. Initial relationships tend to be short in duration, while later more time and effort are spent on relationships. Interaction styles may include group dating, informal dating and more serious relationships with a specific boy or girl. This may provide an opportunity for the adolescent to develop relationship skills but may also hold the danger of premature engagement in sexual activity, teenage pregnancies and the possibility of contracting sexually transmitted infections and HIV / AIDS[20, 22].

The influence of technology on social participation has recently received a lot of attention. As stated before, technology creates a whole new dimension of social interactions in a virtual context. Many benefits and dangers are stated in relation to adolescents' use of the

internet and social networking applications. Some of the benefits included adding to the process of identity formation, facilitation of social interaction for shy adolescents and sharing information while dangers include allowing contact with sexual predators and other criminals which may lead naïve adolescents into dangerous situations like human trafficking[90, 94].

The South African context for adolescents

The specific community and country where an adolescent resides may provide some unique contextual factors that influence occupational performance. The South African context contains various features and challenges for adolescents with LDs which require some special considerations when planning occupational therapy services within this context[20, 95]. Within South Africa contextual factors like the high prevalence of substance abuse, teenage pregnancies, HIV and AIDS infections, child-headed households, unemployment, poverty and gangsterism do not support the health and well-being of adolescents[20, 95].

There are enabling factors, such as learners' constitutional rights to education[13, 96], but in South Africa, many learners with LDs attend special schools which limit their choices regarding further studies and employment. Learners with LDs need reasonable accommodation should they attend mainstream schools[13, 20].

The South African education system is currently undergoing significant changes in order to ensure equal access to education for all[13]. The Department of Education's White Paper 6[13] on inclusive education underlies these changes and aims to provide improved levels of equity and equality for learners with disabilities, including LDs, in the education system[13]. This may be regarded as positive changes for adolescents with LDs, requiring schools to provide these learners with the necessary support to finish school and to aim to prevent dropout from school which is a serious risk[8, 46] as an estimated 50 to 60% of learners drop

out of school before completing their schooling[97-101]. Many of the learners that have dropped out are reported to be idle with limited options available for alternative education and for employment[98, 99].

The quality of education within South African public schools is reported to be a big concern[97], which impacts on adolescents' ability to transition successfully to higher education and employment. The Annual National Assessment results from 2012 to 2014 for Grade 9 learners indicated persistent low levels of achievement on basic literacy and numeracy tests[102, 103] Furthermore, Grade 12 results are often reported to be incongruent with first year achievement at higher education institutions. Of greater concern are reports that Grade 12 results are inflated and thus do not provide an accurate indication of learners' abilities and cannot be relied on alone for selection into higher education and employment[100, 104-106].

Employment statistics paint a bleak picture for those learners who do not complete their schooling and do not progress to obtaining higher qualifications (as is often a concern for learners with LDs [7, 8]). These statistics show that better qualifications result in higher rates of employment[107-109]. Learners straight out of Grade 12 with no further education have a slim 13% chance of being employed in the first year out of school. Their employment prospects improve by the fifth year after leaving school to a 25% chance[110]. First quarter employment statistics of 2017 reported that approximately 72% of South African youth aged 15-24 years old were not economically active and approximately 66% of the economically active group were unemployed[109].

The Employment Equity Act[111] assists people with disabilities including LDs on a legislative level in obtaining employment and the necessary adaptations to successfully engage in the necessary work tasks. Despite these inclusive strategies, employers are often sceptical and

reluctant to employ people with disabilities[112, 113]. The reality reported is that people with disabilities (including those with LDs) often struggle to find, secure and maintain jobs for various reasons[112]. It appears therefore, that the current state of the education and employment sectors in South Africa are contextual factors that contribute to harsh circumstances and great challenges for adolescents with LDs on their developmental road to becoming responsible, functioning and economically productive adults and citizens.

From the description of the temporal, spatial and sociocultural factors as well as the circumstances of adolescents with LDs in South Africa, it may be concluded that the contextual issues facing adolescents with LDs in South Africa are different from the contextual issues faced by children and adults living in the same context. These are also significant factors either promoting or impeding occupational performance and occupational development for adolescents with LDs[20, 28]. Therefore occupational therapy intervention should incorporate these factors in intervention to this population to be occupation-based and to implement best practice.

Little attention has been given to assisting occupational therapists to understand adolescents' subjective experiences of engaging in their occupations (see Appendix A for an in-depth description and review of adolescents' occupations) and the meaning that they assign to these occupations in the literature. Various authors, including Pierce in her Occupation by Design Model[12], have proposed the importance of this factor in being true to the profession's value of being client-centred and for implementing best practice[33, 35, 86].

2.3.3 Adolescents' subjective experience of occupations

The definitive categories of work, leisure and self-care have been criticised in literature to not be culturally-relevant and have not proven useful in understanding clients' subjective experiences of occupations[12, 35, 86, 114]. Hammell[35] states that these categories place the

focus on the productivity of occupations and neglect the individual meaning and subjective experience of the client.

Pierce[12, 86] proposes the use of the broader categories of productivity, pleasure and restoration with the big difference of seeing these descriptors not as mutually exclusive categories, but as overlapping descriptions of how an occupation is experienced. Consequently an occupation is experienced by a client, in this case adolescents with LDs, as a blend of the three categories and this experience varies from adolescent to adolescent according to their subjective experience and the meaning assigned by them[12, 35, 86].

In this section (also refer to Appendix A for an additional review done) some evidence has been provided to demonstrate the effect of LDs on adolescents' occupational performance. The interest in understanding the subjective experiences of individuals and the meaning they assign to occupations, leads one to wonder about the influence of LDs on adolescents' subjective experience and the meaning of their daily occupations. Only one study from the field of psychology was found of adults with LDs reflecting back on their life trajectory and included some of their experiences as adults, but the results did not focus on their perspectives of their occupations or occupational performance specifically. The results mainly reported factors attributing to success as well as the participants' perspectives on the influence of LDs across the lifespan and on their relationships. Their reflection on their experiences as adolescents included a negative experience of education occupations but their greater freedom to choose subjects according to their strengths assisted with relieving the stress of their LD associated weaknesses. A greater focus on activities (possibly including leisure activities such as art) that focus on developing special talents and abilities were stated as a recommendation to improve their occupational experience as well as learning a variety of compensatory methods. Continued intervention beyond education-specific intervention was also stated as a need for young adults to include social and work-related goals[115].

The meaningfulness of occupations influences occupational choice[35, 116]. Occupational choice during adolescence in turn sets trends for adult life and roles[18, 19, 72]. Thus understanding what adolescents with LDs and their parents perceive as their current and future meaningful and important occupations is important for implementing a client-centred and occupation-based approach in practice to not only facilitate occupational performance but also occupational well-being[33].

In conclusion, this section of the literature review described the various person, context and occupation factors involved in the occupational development of adolescents and specific issues regarding each of these that affect adolescents with LDs. Specific aspects of each of these factors were described to demonstrate that the occupations of adolescents with LDs differ from both children and adults with LDs. Consequently an occupational therapist's implementation of occupation-based practice should differ from strategies for intervention with children and adults to address their unique occupational needs.

Having identified the factors relevant to dysfunction that adolescents with LDs may experience, it is necessary to examine the evidence for intervention. In the next section the current available research for intervention with adolescents with LDs will be reviewed as a foundation for implementing evidence-informed practice.

2.4 Evidence informed practice: the current evidence

Occupational therapy for adolescents with LDs should be based on current researched methods and techniques in order to ensure that treatment goals are effectively met. Occupational therapists should also measure and provide evidence of the effectiveness of implemented intervention in terms of occupational outcomes[12, 17, 30].

Evidence-informed practice is important due to an increasing demand for occupational therapists to provide the evidence of the effectiveness of intervention along with increased accountability regarding the length and cost of such services[31, 32]. Occupational therapy occurs within medical, educational and social contexts along with other health professions with various sources of funding such as governmental funding, medical aids, parents and donations. To sustain occupational therapy services for adolescents with LDs, attention will have to be given to provide evidence of the effectiveness of services to the clients (adolescents and their parents), funders and other professionals in order to justify funding and occupational therapy's role in the management of these conditions[32].

2.4.1 Specific studies on occupational therapy intervention for adolescents with ADHD and learning difficulties

In the search for literature regarding occupational therapy intervention for adolescents with LD the databases scoured for literature included Google Scholar, Pubmed, OTseeker and ClinicalKey using a combination of the key words "adolescents", "occupational therapy" "learning disabilities", "learning difficulties" and "ADHD". Results were filtered by age of participants and diagnosis to exclude intellectual disabilities also classified as learning disabilities or learning difficulties in some literature.

Very few studies could be found that focused exclusively on occupational therapy for adolescents with LDs. Only one unpublished dissertation by Strickland[117] investigating the effect of occupational therapy on behaviour in adolescents with ADHD was found that possibly met this criteria, but no further information regarding the study could be found. All the other studies either included other diagnoses with LD or included children and adults along with adolescents in their samples. Consequently there is no conclusive evidence available to support the effectiveness of occupational therapy intervention for adolescents with LDs and thus no evidence to guide decision making during clinical practice.

There are some factors that may play a role in this lack of research. Firstly there is a general lack and need for more and better quality research in the field of occupational therapy and especially research that includes occupational outcomes[12, 17, 31]. Secondly both researchers' and clinicians' lacking awareness of the differing healthcare and emotional needs as well as differing occupational patterns of adolescents have led to the grouping of adolescents with adults and children in studies within various clinical settings. Limited resources and funding most probably also contributed to this [20, 118, 119]. Lastly it has been reported that the high co-morbidity of ADHD and SLDs make these conditions difficult to study on their own[80, 82, 120].

2.4.2 Literature including adolescents with ADHD and learning difficulties along with other diagnoses and age groups

From the literature reviewed a variety of interventions were described for adolescents with LDs although none of them are supported by good quality research. Five categories of intervention were described, i.e. sensory processing, motor skills improvement, cognitive approaches, psychosocial skills as well as vocational preparation and prevocational skills training.

Sensory processing

The first category of interventions focused on sensory processing. Sensory modulation strategies were employed to regulate arousal levels and improve concentration levels[25, 121-123]. A sensory diet and the 'Alert programme' formed part of the suggested interventions which includes a cognitive approach to self regulation[121]. Stratton and Gailfus[122] described a mainly sensory modulation program for ADHD and SLD adolescents and adults within a substance abuse treatment facility with positive effects in assisting with the completion of the treatment program.

Motor skills improvement

Closely linked to the first category is a second category aiming to improve motor skills like motor planning and hand writing due to the relation of LD with motor co-ordination difficulties[124]. This is usually more relevant for younger adolescents, while compensatory measures are often implemented for older adolescents with continued poor motor skills[121, 125]. Cook[121] and Murnane and Simmons[126] recommended sport and exercise as a treatment modality not only for improved motor control but also for a variety of benefits including the lowering of ADHD symptoms[127] and the stated benefit of proprioceptive and vestibular input for comorbid sensory integration difficulties. Murnane and Simmons[126] conducted a study assessing the influence of participation in community team sport and found it to have a positive effect on adolescents' life habits, social integration and the amount of time spent outside the home in social interaction.

Included in this category of interventions is the Interactive metronome (IM) program which is a rhythm and timing program[121, 128, 129]. The samples sizes of all the studies utilising this treatment thus far have been small. Statistically significant improvement in visuomotor abilities and a non-clinically significant improvement of reaction time were reported but no improvement in other attentional processes[129]. A single case study reported significant improvement of language abilities of an adolescent following IM intervention[130]. In a review by Bader and Adesman[131] on the available complementary and alternative therapies for children and adolescents with ADHD, the authors criticise occupational therapy techniques like sensory integration therapy including the use of weighted vests and the Interactive Metronome program due to weak evidence on the effectiveness of these techniques

Cognitive, cognitive-behavioural and behavioural approaches

Cognitive, behavioural and cognitive-behavioural approaches focusing on the improvement of executive functions including problem solving and self control as well as behavioural symptoms like inattention and impulsivity was the third category of interventions

mentioned[121]. In this area it was suggested that both skill acquisition and environmental modification be implemented to lower the impact of LD and ADHD symptoms on adolescents. This included the use of Cognitive Orientation to daily Occupational Performance (CO-OP) and the four quadrant model of facilitated learning[25, 121]. Cermak[124] also suggested the use of the Dynamic Interactional Model of Cognition[132] although studies on this model have mainly focused on head injury populations. These intervention approaches stem from the same theoretical bases as the most evidence-supported interventions from the fields of education, psychology and psychiatry. Current literature from these fields state that behavioural interventions (implying both behavioural and cognitive-behavioural theories) currently have the greatest support by research and display the best overall benefit[133-135], working in conjunction with pharmacological interventions[133]. Cognitive enhancement training including neurofeedback, biofeedback and working memory training were however criticised for inadequate support by research[133].

Psychosocial skills

A fourth category included a variety of psychosocial skills, especially presented in a group context. This category is stated to be especially important due to the high co-morbidity of LDs and ADHD with other mental health conditions or the risk of developing major psychiatric conditions, that often have their onset in adolescence [18, 27, 122, 136]. Skills to focus on include social skills, stress management, assertiveness and life habits. Pscyho-educational groups were also mentioned to improve awareness of relevant issues and conditions[121]. Faigel[136] alluded to the presence of a LD and difficulties with school achievement leading to the development of delinquent behaviour in teenage boys and recommended a multi-disciplinary approach with a combination of family, group and individual interventions.

Vocational preparation and prevocational skills training

The last category of interventions focused on vocational preparation and prevocational skills as transition planning to work and adult life. Two studies by Van Niekerk[137] and Gardner *et al.*[138] each presented a short program for the exploration of workplace and college situations respectively. Both studies made use of natural environments and participation in real life occupations. Positive results were reported in both studies in terms of the participation of the adolescents involved and assistance in the making of career - or further education choices. However, neither of the studies used formal outcomes measures to provide objective measurements of their outcomes.

2.4.3 Broader context studies of occupational therapy for adolescents

There are a variety occupational therapy studies relating to broader categories of adolescents in various practice settings where adolescents with LDs are often part of the population receiving occupational therapy especially due to the high rate of comorbidity with other diagnoses [80]. The contexts include various types of schools[43, 112, 137, 139-141], private practices[142], mental health treatment facilities including psychiatric clinics and substance abuse units[122, 143-145], social service settings like children's homes[20] and juvenile justice centres[136, 146] as well as community settings providing services for especially at-risk youth[20, 126, 147, 148].

There were some of the occupational therapy interventions described by these studies, apart from the ones already mentioned specifically for adolescents with ADHD and SLDs, which will also be appropriate. One big category of interventions was the facilitation of life skills. This included aspects like goal-setting and attainment, time management, stress management, communication skills, financial management and leadership skills amongst others[140, 141, 147-149]. Some studies supported the use of art activities[143], culinary activities[150] and nature-based activities[151] in the pursuit of improving life skills as well as psychosocial functioning.

Various studies advocated for occupational therapists' role in transition planning, especially those delivering school-based services[27, 43, 112, 139, 152-159]. Emphasis was placed on addressing the psychosocial functioning and occupational needs of adolescents preparing to transition to the workplace and into adulthood[27].

One aim that was most probably implied (and viewed as a result of improved life skills) but not overtly stated is occupational therapy's role in preventing adolescents from dropping out of school and supporting academic success. This may be especially important for the LD population due to the reported high rate of school failure and dropout amongst these adolescents[8, 133]. Two studies with Wegner[95, 160], an occupational therapist, as the main researcher related leisure boredom in adolescence as a factor contributing to higher high school dropout rates as well as the possibility of greater engagement in risk behaviour. As the productive use of leisure time falls within the occupational therapy domain of concern[28], it may be concluded that occupational therapists have a crucial contribution to make in this area.

A unique study by Olson[161] described parent-adolescent activity groups in a psychiatric clinic where adolescents and parents were engaged in co-occupations. Activities like cooking, craft activities and playing games were offered as options for parents and adolescents to choose from and participate in either in parallel fashion or collaboratively. The groups reportedly improved parent-adolescent relationships by focusing on interaction styles, practicing the handling of difficult behaviour and providing a basis from where leisure activities for family time at home could be planned[161]. This may be valuable for adolescents with LDs because their relationships with their parents are also often reported to be difficult[133].

Silewski[145] advocated for including activities that promotes wellness along with the usual interventions that address the dysfunctions related to mental illness in adolescents. This is important in terms of the profession's aim to promote health and well-being and prevent disease instead of only focusing on intervention for populations where dysfunction is already present[28]. Doble and Santha[33] introduced the concept of "occupational well-being" stating that occupational therapists should look beyond improving occupational performance alone, to include clients' subjective experiences of their occupations by addressing clients' occupational needs including their need for amongst others accomplishment, affirmation and pleasure .

2.4.4 Bottom-up vs. top-down or occupation-based approaches

In practice and in literature there seems to be one group of interventions focusing mainly on performance skills and client factors which constitutes a bottom-up approach. The other group takes an occupation-based or top-down approach providing intervention at the level of the adolescent's life roles and occupations. From the literature reviewed there seems to be some evidence supporting both approaches. In general in the field of occupational therapy there is a strong movement towards the promotion of occupation-based practice to return practitioners to the philosophical roots of the profession with a strong focus on occupation and occupational outcomes [12, 30, 40, 162]. There is also literature that describes a need for the review of current paradigms to suit the specific needs of adolescents[27]. Loukas[43] urged especially school-based occupational therapists to take a more holistic and occupation-based approach because it is better suited to the multidimensional challenges of adolescence especially when disability is present.

Drawing further from neuroscience, successful occupational therapy interventions, including services to adolescents, should facilitate neuroplastic changes in order to bring about lasting improvement in behaviour and consequently in occupational performance[63, 163-165]. Lane

and Schaaf[163] provided some support that Ayers'[166] principles for sensory-motor based interventions draw on the basis of neuroplasticity to bring about positive changes. When being true to the profession's philosophy of occupation and health, engagement in meaningful occupations would be the occupational therapist's tool for achieving these neuroplastic changes. Early conceptual research are providing some favourable results in linking engagement in therapeutic occupations chosen with the right blend of environmental factors, activity demands and meaningfulness to the client with neurological changes[163, 164]. This presents preliminary support, even at neurological level, that occupation-based practice is important when planning services in a practice area like adolescents with LDs to facilitate lasting changes.

Overall very few studies or interventions incorporated both client-centred and occupation-based approaches to goal-setting when planning or evaluating progress during intervention. Chu and Reynolds[37] included a team-based approach to goal-setting, incorporating the family before the commencement of an intervention in their practice delineation model that mainly focuses on children with ADHD. The Instrumentalism in Occupational Therapy (IOT) Conceptual Model Ikiugu and Anderson[148] constructed for adolescents with Emotional and Behavioural Disorders utilised the Canadian Occupational Performance Measure (COPM)[167] along with an interview and other measures that take into consideration an adolescent's subjective views of their important occupations.

Concluding this section, the reviewed literature provides some guidance in terms of interventions that would be appropriate and useful to utilise in the treatment of adolescents with learning difficulties. Generally the available studies had small sample sizes, lower quality research designs or methodologies, some were conducted quite a few years ago and most did not provide good quality support for the effectiveness of the various interventions. Thus it may be concluded that more and better quality research specific to adolescents with LDs is needed. Better quality research will provide a better view of what best practice

should entail in the process of implementing evidence-informed practice in this area of practice[32]. This is needed to support the role of occupational therapists in the management of adolescents with LDs.

Research is also needed to guide occupational therapists in the implementation of occupation-based practice for adolescents with LDs. Knowledge of the perceptions of specific occupational performance priorities of adolescents with LDs and their parents are needed in order to plan intervention according to their occupational performance needs as is suggested by Baum and Law[36].

More recent literature has changed the focus from evidence-based practice to evidence-informed practice[168, 169]. Evidence-informed practice acknowledges the importance for clinicians to have knowledge of current research studies and interventions that have the most evidence of effectiveness, but it also acknowledges and incorporates other factors that may influence clinical reasoning when making decisions in specific contexts and for specific clients[168, 169]. Evidence-informed practice provides greater flexibility for using theories and research as a basis, but also incorporating amongst others the therapist's clinical experience and the client's perspectives[168, 169]. It is therefore a less rigid application of the current evidence in service of fitting a client's intervention to their unique context[168, 169].

2.5 Conclusion

In occupational therapy, generally and specifically for adolescents with LDs, best practice is most often occupation-based, client-centred and evidence informed[17, 41]. Pierce's Occupation by Design model[12] was presented as a possible foundation for clinical reasoning to plan effective interventions including the constructs of appeal, intactness and accuracy to assist in planning effective interventions.

The occupations of adolescents and their occupational development are different from children and adults in terms of various person, context and occupation factors[18, 19, 43, 44]. The significant impact of LDs on the various person, context and occupation factors of an adolescent's occupations were described and the argument was made that occupation-based practice for adolescents with LDs will consequently be different from interventions to children and adults with similar conditions.

Literature was also presented on the importance of understanding adolescents with LDs and their parents' subjective occupational experiences and the meaning that they assign to the various occupations of adolescents as part of maintaining the profession's value of client-centeredness[29, 34, 170]. The more fluid categories of productivity, pleasure and restoration may aid in the process of understanding the subjective experience and meaning assigned to various occupations of adolescents with LDs[10]. This will help occupational therapists to better understand the influence of these on occupational choices which set trends for these adolescents' future adult roles[35, 116] and ultimately influence not only occupational performance, but also occupational well-being[33].

Very little specific occupational therapy research was found during the literature search to guide decision making for occupational therapy with adolescents with LDs. Some applicable occupational therapy research was reviewed that included children and adults with LDs as well as broader adolescent populations. Interventions described included sensory-based interventions[25, 121-123], exercise and activities to improve motor skills[121, 124, 126, 127], cognitive approaches[25, 121, 124, 132], improvement of psychosocial skills [121, 136], vocational preparation and prevocational skills[137, 138], life skills facilitation[140, 141, 147-149], transition planning[27, 43, 112, 139, 152-159], school dropout prevention and[95] promotion of leisure activities as well as parent-adolescent activity groups[161] and wellness or occupational well-being interventions[145]. Interventions based on behavioural and cognitive-behavioural theories are currently most supported by research in other professional fields as effective interventions[133-135]. In the

absence of good studies within the occupational therapy field, it might be noteworthy to occupational therapists to consider utilising intervention frames of reference based on these theoretical underpinnings when planning occupational therapy for adolescents with LDs in order to implement best practice[124].

CHAPTER 3 METHODOLOGY

3.1 Introduction

In this chapter the methodology of the study that was followed will be described. Firstly the research design will be stated. Secondly the study population's parameters will be discussed including the inclusion and exclusion criteria as well as the sampling and procedure for recruiting participants. Details regarding the measuring instrument will then be provided, followed by information regarding the pilot study and the data collection process. Finally, the data analysis procedure as well as trustworthiness and ethical considerations that were adhered to during the study, will be described.

3.2 Research design

An explorative qualitative design was chosen due to the limited research available regarding adolescents with LDs as a starting point to direct further research[171]. The research design is useful in providing the investigator with better understanding and insights into the stakeholders' perspectives and their lived experience within their specific context[34, 171]. It is also an important starting point for directing further research in an attempt to generate evidence to strengthen evidence-informed practice. Hammell[34] also stated that qualitative research is needed and is the most appropriate method to inform clinicians in terms of client-centred practice as most research thus far has been conducted from clinicians' point of view thus not incorporating clients' perspectives regarding intervention[34]. Relying on evidence that does not include a client-centred perspective to guide clinical decision-making is thus contradicting to the profession's stated value of client-centeredness [34]. It was also suggested by Hammell[34] that it is the most appropriate design to specifically understand clients' priorities, and was thus deemed best suited to assist the investigator in understanding adolescents with LDs' and their parents' perspectives on their OPPs.

The explorative qualitative design was used to explore the experiences and the perceptions of adolescents with LDs and their parents of their most important current and future occupational performance priorities (OPPs) through a combination of focus groups and semi-

structured interviews with the adolescents and parents separately. In two incidences the adolescents were present at the interviews with their parents, but did not fully participate in the interviews. A card sort with cards picturing various occupations applicable to adolescents was used to lead and structure the interviews or focus groups. Descriptive exploratory research was used to provide a description of the current and future priorities for occupational performance for adolescents with LDs. The research also explored the perceptions of the adolescents and parents on the occupations with which they are currently having difficulties as well as their views on the effectiveness of previous and current intervention on these difficulties with the various occupations mentioned.

3.3 Population and Sampling

It was decided to include both adolescents and parents in the study as some sources report that adolescents often minimise their difficulties and problematic behaviour[133, 172]. The decision to conduct the adolescent groups or interviews separately from their parents was based on the premise that adolescents are often more willing to talk about their difficulties when their parents are not present and in the context of a peer group where they may experience a safe environment with a sense of cohesion and universality when talking about their difficulties. Consequently, a greater chance of gathering rich data was anticipated when conducting separate groups and interviews.

The study used purposive convenience sampling[173] as participants and settings who were conveniently available and willing to participate were recruited. An attempt was however made to select participants from a variety of educational settings, from different grades (and consequently age groups), genders, races and socio-economical backgrounds to ensure a variety of perspectives amongst the participants. Occupational therapists and other staff at various schools, private practices and organisations, including ADHASA (Attention Deficit and Hyperactivity Support Group of South Africa) and RADA (Red Apple Dyslexia Association),

where services to adolescents with LDs and ADHD are provided were contacted to enquire whether they would be willing to recruit adolescents in their setting to participate in the study. The schools selected were mainly the special (LSEN) schools, both government and private, in the area that accommodates adolescents with LDs as these were the most probable settings for recruiting participants that would fit the inclusion criteria. Both English and Afrikaans speaking adolescents were included. Those overseeing the recruitment were asked to identify adolescents from a variety of backgrounds and ages to include a variety of views. They were specifically asked to select learners from each grade (thus a variety of ages), including both male and female and from different races if possible. Including participants from the variety of educational settings were also done purposefully to increase the variety of perspectives, as it was thought that the educational setting may play a significant role in how the adolescents and their parents experienced the functional influence of LD on their productivity. Variety amongst parent participants was ensured by the variety of adolescent participants and by attempting to include both mothers and fathers.

Three schools for Learners with Special Educational Needs (LSEN) (two government and one private), were willing to assist, but only the government schools were successful in recruiting participants. Two adolescents attending main stream schools and their parents were recruited from occupational therapy private practices where they had received intervention. One adolescent and parent pair from a home school setting was recruited via an acquaintance of the investigator. The number of focus groups and interviews were determined by data saturation.

3.3.1 Inclusion criteria

Adolescents: 13 to 21 years old, with a learning difficulty (dyslexia and other SLDs) and / or ADHD that are following a normal mainstream curriculum at a mainstream, LSEN or home school.

Parents: The parent/(s) of the already recruited adolescents between the ages of 13 and 21 years old with a diagnosis of either ADHD and/or a SLD. The parent(s) must be the primary caregivers and have daily contact with the adolescent.

3.3.2 Exclusion criteria

Adolescents who have gross neurological damage or another co-existing psychiatric, neurological or physical disorder including cerebral palsy, traumatic brain injuries and significantly below average intelligence that will impact the nature of the functional difficulties experienced by the adolescent.

3.4 Measuring instrument (See appendices A to D)

Initially the researcher opted for utilising focus groups as a data collection method with a card sort to provide some cues to assist in discussing the participants' views about their priorities for their occupational performance and as a starting point for further discussion regarding their important occupations. The researcher aimed to utilise the group interactions within the context of the focus group to gain a richer insight into the decisions made about the participants stated OPPs as it is reported that decision making is supported by a group context[174]. The intention of using the card sort activity was to assist in focusing the discussion specifically on occupations and to assist participants in identifying and ranking their priorities. Due to logistical difficulties encountered during the recruitment process as well as time limitations within the school context where focus groups were conducted,

further data was collected via in-depth semi-structured interviews scheduled at times where there were no time constraints. Skilfully conducted interviews are also reported to provide valuable data in terms of understanding a participant's point of view and to obtain detailed data about their opinions and priorities[174, 175].

3.4.1 Demographic questionnaire (Appendix B)

A demographic questionnaire (Appendix B) was constructed by the investigator to gain appropriate information for screening possible participants using the inclusion and exclusion criteria. This was needed because in some of the settings the diagnostic information and clinical history of the adolescents were not necessarily known by the staff that assisted with recruitment. It also assisted the investigator in purposefully including a variety of participants representing a variety of views and experiences of LDs. The questionnaire requested information regarding the names and contact details of parents and adolescents as well as the age, grade and some background regarding the diagnosis and intervention process of the adolescent participants. This included information such as whether a formal diagnosis had been made, when and by whom the diagnosis had been made and the age of the child at the time of diagnosis. Further information regarding current medical intervention included whether the child was taking medication, the details of the medication and any other therapy or intervention that they were receiving at that time. Lastly the questionnaire requested information of any other medical or mental health conditions to ensure that there wasn't a co-existing condition that met the exclusion criteria.

3.4.2 Card sort (See Appendix C)

The first part of the interview or focus group utilised a card sort activity as a means of creating a list of usual adolescent occupations and to familiarise the participant(s) with the concepts and reasoning behind classifying the occupations into the categories of productivity, pleasure and restoration. The occupations represented by the cards were

compiled by the investigator from literature describing the occupations of adolescents (please refer to Appendix A: Question and Card sort development and Appendix C: Cards for card sort activity). Examples of the occupations included activities like studying, spending time with family, playing games and eating. Pictures sourced from the internet were used to represent the various occupations. The investigator's two university supervisors, who are both experienced researchers, reviewed the cards and the pictures utilised for appropriateness. It was suggested that some of the pictures be replaced with pictures containing adolescents from a greater variety of racial groups. The investigator changed a few of the pictures before printing the cards for use in the focus groups and interviews.

The participant(s) were asked to classify a few of the cards into the categories of productivity, pleasure and restoration until the participant(s) seemed to have an understanding of the concepts and reasoning behind the classification. Following the classification of the cards, the rest of the cards were reviewed and participants were asked to identify any occupations that were not listed and that needed to be added to the list. Before commencing the focus groups and interviews there were 46 cards in total. As data collection progressed, occupations were added as suggested by participants at the beginning of the card sort activity. By the end of the data collection there were 53 cards all together.

3.4.3 Focal Questions (refer to Appendix D)

In the next part of the interview four focal questions that had been prepared beforehand (see Appendix D) were posed to the participant(s) (adolescents or parents) by the investigator one at a time as a means of eliciting relevant information. The first two questions were constructed based on Pierce's[12] Occupational Design model utilising the "Appeal"[12p252] construct to better understand the adolescents' and parents subjective experience and assigned priority of their occupations in the categories of "Productivity, Pleasure and Restoration" [12p252]. The last two questions were not constructed according to

the three categories, but were set as general questions to elicit responses regarding the participants' views on the adolescents' experienced occupational difficulties and their experiences with intervention thus far. The whole set of questions were then also translated to Afrikaans in order to present these to the learners who were Afrikaans speaking during focus groups and interviews. Where both English and Afrikaans participants were present, questions were first presented in English and then in Afrikaans. Questions were presented in their language of instruction (which was English) to the learners whose home language was not English or Afrikaans.

The cards from the card sort activity were used as cues, but further deeper level questioning appropriate to the participants' responses were utilised for the investigator to a achieve a better understanding of participants' motivations for choosing the various occupations that they chose thus contributing to collecting rich data.

Content validity of the questions was ensured by consulting the university research supervisors (both have masters' degrees and are knowledgeable in research methodology) regarding the wording and clarity of the focal questions compiled. Feedback was given verbally and after some discussion regarding the clarity of the questions appropriate adjustments were made to ensure that questions were clear. The questions were also reviewed by an occupational therapist with more than 5 years clinical experience in working with adolescents with LDs. Feedback was provided via email. No further adjustments were suggested by the occupational therapist. Questions were used as is during the focus groups and interviews and there wasn't a need to adjust the questions from one group or interview to the next. Prompts and deeper level questioning appropriate to each situation was used to encourage further discussion to reveal participants' deeper thoughts and motives following their choices of their occupational performance priorities.

3.4.4 Interview and Focus group process (refer to Appendix D)

The same format of interviewing and interview questions were used as is for both the focus groups and individual interviews. The only difference was that during the discussion related to the first two focal questions, the group members in the focus groups completed slips of paper indicating their prioritised occupations in each area of occupation while in the interviews the investigator made discussion notes, recording the participant's responses as to not disrupt the discussion.

The focus groups and interviews were consequently conducted as follow: After the card sort activity as introduction, focus group participants (adolescents) were presented with slips of paper with the three categories productivity, pleasure and restoration in columns with a space to write their first, second and third priorities. During the interviews (with both adolescent and parent participants) the investigator made similar discussion notes on the participant's responses. Parents were asked to give an indication about their occupational priorities for their child. The first slip of paper was utilised for the first question regarding their perceptions on which three of the occupations from the list they regard as the most important (in order of priority) in each category for the adolescent with LDs at the moment. After or during the process of selecting these occupations, a discussion was held on their responses. Further prompting and in-depth questioning was utilised to gather qualitative data in terms of the participants' reasons and motivation for selecting the various occupations and regarding their assigned priorities. The process was repeated for the second question, but this time they were asked to select the occupations that they perceived would be the most important for them (their child in the case of the parent interviews) in future – for the first five to ten years after leaving school.

The third question posed to the participants asked them to identify the occupations from the list that they (the adolescent) or their child (in the parent interviews) currently have difficulty performing and the final question inquired about their perceptions on which

interventions and people have helped them (the adolescent) or their child (in the parent interviews) the most with these difficulties. The investigator made notes of the mentioned occupations during the discussion. The occupations mentioned during this part of the focus group or interview weren't prioritised as were the occupations chosen in the first two questions. Deeper level questioning was used to elicit further or deeper responses where the responses were short or lacked detail and clarity. The interviews and focus groups were audiotaped using a voice recorder.

3.5 Pilot study

Teijlingen and Hundley[176] as well as Kim[177] state that a pilot study during qualitative research is very beneficial for trialling and adjusting the research instrument as well as for feedback for the investigator regarding the use of self during qualitative enquiry methods such as interviews and focus groups.

Consequently a pilot study was conducted by the investigator, who went on to conduct the interviews and focus groups to familiarise herself with the structure of the focus group and interview process that was used as method of data collection. This was performed with an extra group of adolescents who were not included in the study. Two occupational therapists that had some experience in conducting group sessions were asked to attend the pilot study group and provided feedback to the investigator regarding the procedure for the focus groups and observations regarding the adolescents' responses during the process. Adjustments in the presenting and conducting of the procedures for the focus groups and interviews were made according to the occupational therapists' feedback. It was decided to leave the list of occupations from which to choose uncategorised to allow for individuals' differing perceptions on the category that they would assign an occupation to. This was in line with literature regarding the subjective experiences of the categories of occupations and

the suggestion that the same occupation may at times be classified experientially into more than one category at the same time[12, 86].

3.6 Data Collection

Contact with possible sites and participants were only made after ethical clearance had been received from the University of Witwatersrand Research Ethics committee (Appendix E).

Staff (mostly occupational therapists) at the sites that consented to participation were provided with information letters, consent and demographic forms to hand out to possible participants in their settings that matched the inclusion criteria, keeping in mind the investigator's request to include participants from a variety of grade or age groups, genders, socio-economic backgrounds and races. The information letter was handed out with the consent forms to ensure that participants were adequately informed before consenting to participate in the study. Returned consent forms where consent was given were screened for suitability based on the information provided on the demographic questionnaire completed for each family (Appendix B). The investigator tried to include both the parents and the adolescent in the study in order to compare their perspectives, but not all the parents were available or responded to the attempts of the investigator to contact them to arrange a meeting. Only at the two government LSEN schools were enough participants recruited for focus groups. The focus groups were arranged directly with the occupational therapists at a time that suited the schools' and adolescents' programs e.g. during their assembly period or sport period. The groups were conducted in an occupational therapist's office and a boardroom respectively. The venues were familiar and comfortable for the adolescents and distractions were limited as far as possible.

There were not enough parents available at a mutually convenient time to arrange a focus group at any of the sites or at another venue and therefore it was decided to rather conduct

individual interviews with them. At sites where there were too few participants for a focus group as well as in cases where the adolescents were unable to attend the focus group due to other activities or having been absent from school the day of the focus group, individual interviews were arranged with them as well. These parents and adolescents were contacted via email or telephonically to arrange for an interview.

Interviews were arranged at a time and place that were mutually convenient to the investigator and participants. Some interviews were held at the participants' homes, but most parents felt more comfortable with meeting at restaurants in their area. The investigator attempted to limit as much of the distractions as possible by choosing a table in a quiet area of the restaurant. This also ensured confidentiality in trying to limit the information that may be overheard by others. There were however some distractions that could not be controlled, such as background noise. One pair of adolescent and parent interviews was conducted telephonically due to logistical reasons. Information including definitions and the pictures of the various occupations were sent to the participants via email before the interviews and reference were made to these throughout the telephonic conversation.

Two adolescent focus groups were conducted and analysed before further adolescent participants were sampled for another focus groups. The need for including subsequent individual adolescent interviews was also established and adolescent participants were sampled for these. A similar process was followed with the parent interviews: two interviews were performed and analysed before subsequent parent participants were sampled and contacted for further interviews. The investigator continued with subsequent interviews until data saturation was achieved and no new themes arose from the discussions. In total three adolescent focus groups were conducted. Group one had three participants, group two had four participants and group three had five participants. Six further adolescent interviews were conducted and nine parent interviews.

3.7 Data analysis

A summative content analysis[178] was conducted to further analyse the priorities in terms of different occupations chosen in the card sort activity across the different focus groups and interviews. The ranking scores obtained from the focus groups and interviews for the first two questions were analysed to create a list of priorities for each category of occupations (productivity, pleasure and restoration). This was done by creating a Microsoft Excel spreadsheet with all the occupations and the rankings from the participants' voting slips for each category and for the various questions separately. Occupations from the card sort activity that had been selected in each category (productivity, pleasure and restoration) by the participants as priorities on their voting slips were given scores according to the priority assigned to them. An occupation selected as number one on the priority list for each category (productivity, pleasure and restoration) was assigned three points; number two was assigned two points and number three one point. The points assigned to each occupation in each category were tallied and a total score was calculated for each occupation in each category. A ranking list was created for each category (productivity, pleasure and restoration) with the occupation that had the highest score as number one, the occupation with the second highest score number two, etc. This process was completed separately for adolescents and parents to obtain a ranking list for each of the first two questions (priorities for now and for future) separately. During the focus groups, these priorities were listed for each participant individually. The separate lists for adolescents and parents were then compared and the differences and similarities between the adolescents' and parents' perceptions of the most important current and future OPPs were reported on.

A ranking list was also created for occupations selected in response to question three on the occupations that the participants perceived as currently problematic for the adolescents. These occupations were not prioritised or categorised (in the categories of productivity, pleasure and restoration) as was done with the first two questions and thus received equal weighting; a score of one was assigned to every occupation when mentioned. Focus group

answers were recorded as representative of the whole group and not given extra weighting for the number of participants that agreed to the mentioned occupational difficulty.

A journal was kept of the impressions of the investigator of each focus group and interview as well as extra comments that participants made before or after the conversation that was recorded. The focus groups and interviews were transcribed verbatim and used in the content analysis process. Content analysis techniques were applied to the raw data to identify themes. The process as described by Graneheim and Lundman[179] was mainly followed and supplemented by the descriptions of Hsieh and Shannon [178]. These processes were adapted according to the research aim and objectives.

The focus group and interview transcriptions were read through, in addition to listening to the audio recordings several times to obtain a sense of the whole and provide context for the text of the specific focus group or interview[179]. The manifest content analysis commenced by extracting text from the focus group and interview transcriptions pertaining to each of the focal questions. These were brought together to form one text which constituted the unit of analysis[178, 179]. It was then condensed into meaning units[179]. Next the meaning units were coded, giving meaning units with similar ideas across different focus groups and interviews the same code[179].

It was decided to utilise inductive coding as the investigator felt that coding according to the model's constructs only did not provide a full understanding of participants' motives and perspectives in relation to their priorities, perceived difficulties or the intervention accessed thus far[178]. The context was kept in mind during the coding process. Constant comparison was used to compare codes between meaning units, the rest of the data and to literature to establish the categories and sub-categories[180]. Lastly the latent content was analysed and themes identified[179]. Contradicting themes were identified and reported on.

The research supervisors were approached to independently audit and check the content analysis process as peer debriefing[181]. The codes were then adjusted as needed. The different perspectives voiced by the adolescents and parents were compared to identify similarities and differences between the two groups.

3.8 Trustworthiness in the research process

3.8.1 Credibility

The measure by which the truth or reality of the situation is accurately presented, i.e. how well the various realities of the participants are portrayed by the investigator is called the credibility of the research process[181, 182].

Triangulation of data sources and investigators was done in the following ways:[181, 182] Different informants were used to verify information - both adolescents and parents were included. Participants with different views were purposefully included to represent different views[179]. This was done by purposefully including adolescent participants of various grades and ages, races, socio-economic backgrounds and both genders as well as from different educational institutions i.e. public, LSEN and home school settings. As it was opted to recruit the parents of the adolescents who had already participated in the study, a variety of opinion could also be ensured. The participants (both adolescents and parents) were experienced in the phenomenon under enquiry namely living with a LD (or a child with a LD) as they had been coping with the influence of LD on their lives since the condition had been diagnosed usually in preschool or early primary school.

Two other analysts (the investigator's supervisors) apart from the investigator audited the content analysis of the data and verified emerging themes. Information collected from the focus groups and interviews was compared to the literature. Reflexivity was included by

means of an audit trail including a field journal that contained the schedule and logistics of the interviews, a method log and personal reflection on the investigator's thoughts, ideas, hypotheses, problems and frustrations regarding the research process. This helped the investigator to become aware of biases and preconceived assumptions. A code book was also kept to add new codes as successive focus groups and interviews were analysed. The investigator also spent a significant amount of time in the field conducting the focus groups and interviews[181].

3.8.2 Transferability

The extent to which data from a study can fit into another similar context is called the transferability[181, 182]. In this study it was ensured by providing a rich, thick description of the research participants, the research methodology, content analysis procedure and the emergent themes from the raw data. Care was taken in selecting the sample of participants to include various views, contexts and perspectives in the field[181].

3.8.3 Dependability

Dependability is the amount of variability or the consistency of the data in qualitative research i.e. if the study were to be repeated in the same circumstances that it would yield the similar results[181, 182]. The rich, thick description described under transferability contributed to dependability[181]. A code-recode procedure was followed to improve consistency of the codes assigned, categorisation and themes identified[181]. Peer examination was performed by methodological experts (supervising lecturers) to check the research plan and implementation[181].

3.8.4 Confirmability

The date and investigator's amount of neutrality in qualitative research is called the confirmability[181]. This is to ensure that the perspectives reported on were truly those of the participants and was as far as possible not influenced or obscured by the investigator's ideas and perspectives[182]. Confirmability was complied with in the ways: the investigator was sufficiently trained and competent in conducting the focus groups and interviews due to her training in group-facilitation skills as part of the undergraduate occupational therapy curriculum and her clinical experience in conducting groups and interviews with adolescents. Participants did not receive payment for participation in the study thus not influencing the information provided during interviews. Triangulation described under credibility also contributed to the confirmability of the data[181]. The investigator's field journal helped her to maintain awareness of her own assumptions and views to try to limit bias during the conducting of the focus groups, interviews as well as the content analysis process[181]. Documents, instructions during the focus group or interviews and focal questions were presented to the participants as far as possible in a language with which they are comfortable with to limit its influence on the data.

3.9 Ethical considerations

Ethical clearance for the study was granted by the University of Witwatersrand Research Ethics committee and an ethical clearance certificate was issued (Appendix E). The ethical guidelines as set out by the Declaration of Helsinki[183] and the South African Medical Research Council[184] were considered and adhered to during the research process. The following ethical principles that were specifically described by Van Niekerk[185] in relation to research within the occupational therapy field were addressed in the following ways:

3.9.1 Respect for persons including their right to autonomy and to self-determination

Consent forms (Appendices F-I) were compiled and were given to participants to sign before being contacted to participate in the focus groups or interviews. Before recruitment of participants was initiated, consent was first obtained from the relevant institutions where possible participants would be recruited from. These included the Gauteng Department of Education (Appendix J), School Districts Officers, School Principals or Managing Directors, School Governing Bodies or School Boards and private practice owners. Staff including teachers and occupational therapists that needed to assist with recruitment and logistical arrangements were also approached for consent. Consent was obtained from the parent for their and their child's participation and permission to audiotape the groups was also obtained. The adolescents were asked for signed consent / assent for participation and permission to audiotape the groups. An information letter regarding the details of the study were part of the consent form to ensure that participants were informed of the risks, benefits and implications for taking part in the study. In the case of an adolescent(s) with reading difficulties, the main points of the information letter were verbally communicated to the participant(s) before commencing focus groups or interviews. Opportunity was given to answer any questions or clarify any issues regarding the study before starting with the focus groups or interviews. The participants were given the opportunity to withdraw from the study at any time without any adverse consequences. Participants' right to confidentiality could not be ensured during participation in the focus groups, but during interviews confidentiality was adhered to. Participants were ensured that their responses would not be shared directly with any other person involved, especially not sharing an adolescent's response with his / her parent(s) and vice versa. In the two instances where the adolescent was present with the parent interview, parents were asked whether they would be comfortable sharing information with the adolescent present and this was confirmed by the parent before the interview continued. The participants' identities were kept anonymous and aliases were used in quotations or narratives from the focus groups and interviews during the reporting and discussion of the results[185].

3.9.2 Beneficence (including non-maleficence)

While the study was not directly beneficial for all the participants involved, indirectly they benefitted because the study will inform occupational therapists and other stakeholders regarding adolescents with LDs' and their parents' perspectives on OPPs, occupational difficulties and intervention from the study's results to improve planning and intervention to adolescents with LDs according to these priorities. Consequently this will improve services to this population according to the profession's values of client-centeredness and occupation-based intervention[185].

3.9.3 Justice

All participants were treated equally and with respect by the investigator regardless of whether they responded to attempts to be contacted, agreed to take part in the study or decided to withdraw. Care was taken to include a diverse range of adolescents in the study, thereby giving everybody an opportunity to participate. The results will be offered to all institutions and participants after examination of the research report has been completed[185].

3.10 Conclusion

In this chapter the methodology of the study was described. The research design was stated as a qualitative descriptive research design. The population on which the study focused included adolescents with learning difficulties and their parents. Purposive sampling aimed to include a variety of opinions and perspectives within this population. Focus groups and semi-structured interviews were utilised as the measuring instrument and a pilot study was conducted to pilot the group / interview process, card sort activity and focal questions. The data collection process was described and included a description and reasons for adjusting the process from utilising only focus groups to including interviews as well. Inductive qualitative analysis was utilised to analyse the transcriptions from the focus groups and

interviews to appropriately categorise and identify themes emerging from the data. The procedure for identifying the most important OPPs for current and future occupational performance, difficulties with these and perceived helpful intervention as well as the comparison between adolescent and parent perspectives were also described. Aspects to ensure trustworthiness were discussed including credibility, transferability, dependability and confirmability. Ethical considerations during the research process were also discussed including maintaining respect for persons (respecting their right to autonomy and self-determination as well as confidentiality), beneficence and justice.

CHAPTER 4 RESULTS

4.1 Introduction

In this chapter the results will be presented. Firstly the demographics of the adolescent and parent participants will be provided, followed by details regarding the themes identified by the process of inductive coding of the interviews and focus groups. The results of the activities chosen as priorities from the card sort activity will also be presented along with the inductive coding themes.

4.2 Demographics

The demographic information is presented to provide detailed information regarding the participants and to confirm the variation amongst the participants which ensured a variety of perspectives for the purposes of trustworthiness including credibility and transferability of the study [181, 182].

During the data collection process eighteen adolescent - and nine parent participants were recruited from two special (LSEN) schools, two occupational therapy private practices and one acquaintance of the investigator. Three focus groups and fourteen interviews were conducted of which two interviews were telephonic interviews.

Most of the adolescent participants were male (twelve out of eighteen) while only one father participated. Focus groups were conducted in the home language of the participants except for two of the participants where English was used as this is the language in which they received education.

Table 4.1: Gender, race and home language of adolescent and parent participants

		Adolescents n = 18	Parents n = 9
Gender	Male	12	1
	Female	6	8
Race	Caucasian	16	9
	African	2	0
Home Language	English	9	4
	Afrikaans	7	5
	Other	2	0

In the following sections the characteristics of the adolescent group (as a whole) will be compared to the characteristics of the adolescents whose parents also participated in the study. This demonstrates the background of the participants and their experience regarding LDs, confirming a variety amongst the adolescents, and the parents and thus consequently the variation in their perspectives. In order to compare the perspectives of the adolescents and parents a homogeneous group needed to be avoided i.e. if only parents of younger adolescents were included or only parents whose children attended special schools, there would be too little variability in their perspectives.

4.2.1 Age

Adolescent participants ranged between thirteen and nineteen years of age, with median age of seventeen years. The age distribution of the adolescents whose parents participated was the same as for the adolescent participants whose parents did not participate. The average age of initial diagnosis for a LD was eight years.

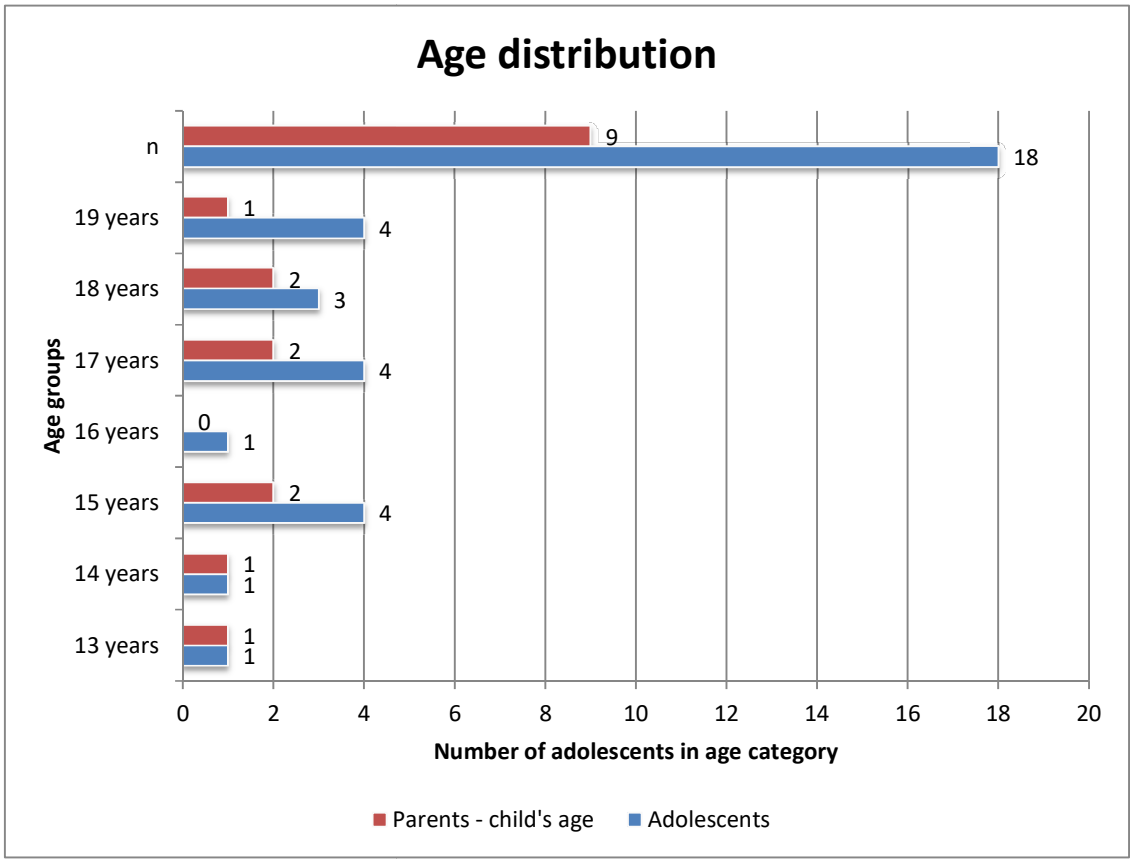

Figure 4-1 Age of adolescent participants and adolescents whose parents participated

4.2.2 Grade

The grade for adolescent participants as well as the adolescents whose parents were interviewed ranged from grade 7 to grade 12, with the median being grade eleven.

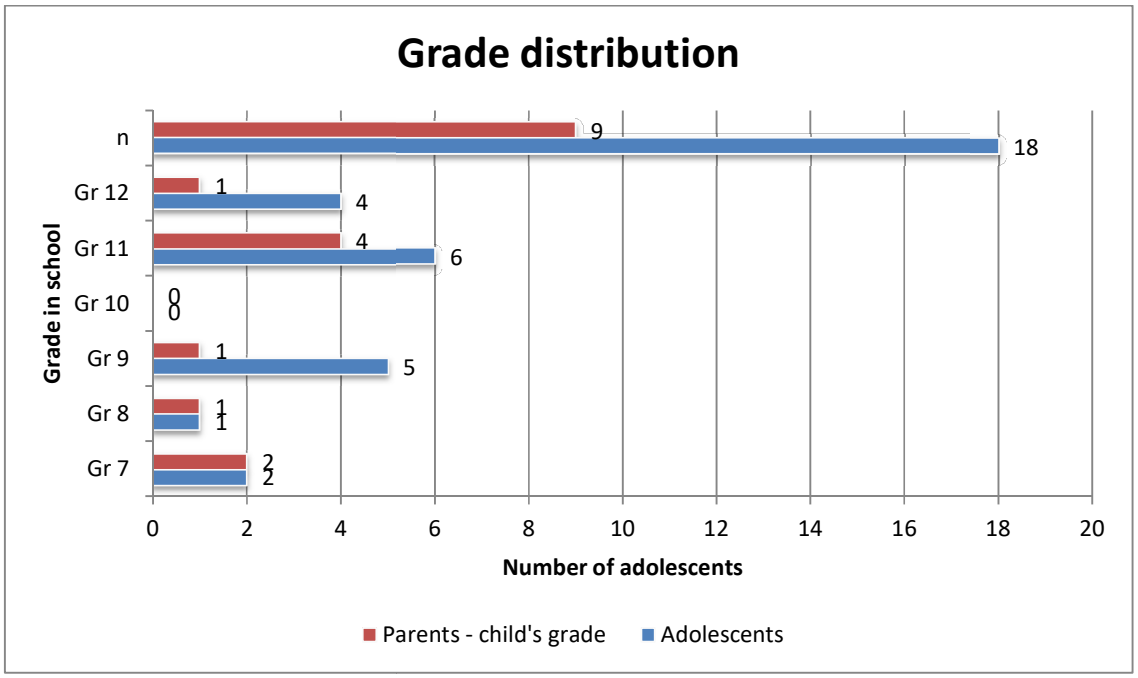

Figure 4-2 Grade distribution of adolescents and adolescents whose parents participated

4.2.3 Diagnosis

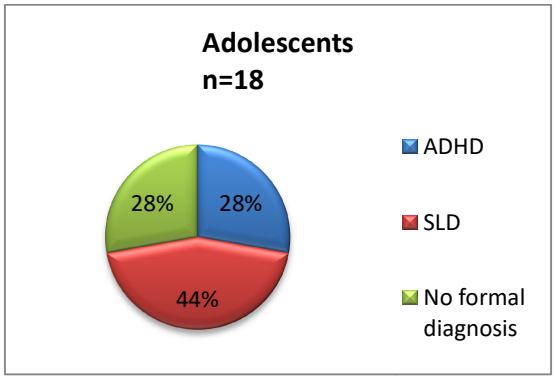

Figure 4-3 Diagnoses of adolescent participants

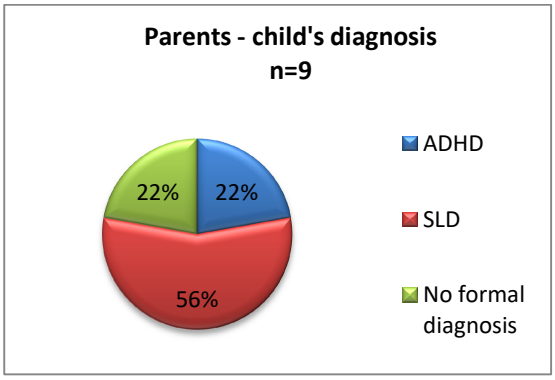

Figure 4-4 Diagnosis of parent participants' child

Specific learning disorders (SLDs) accounted for the largest number of diagnoses amongst adolescent participants as well as of the child's diagnosis in the case of parent participants. Approximately a quarter of the diagnoses in both cases were Attention Deficit and Hyperactivity Disorder (ADHD). There was little difference in the number of participants in both groups who reported no formal diagnosis, but was attending a special school catering for learning difficulties (LDs).

4.2.4 Type of schooling

The majority of the adolescent participants and adolescents whose parents participated were attending special schools for LDs. Two participants attended mainstream schools and one followed a home-schooling curriculum.

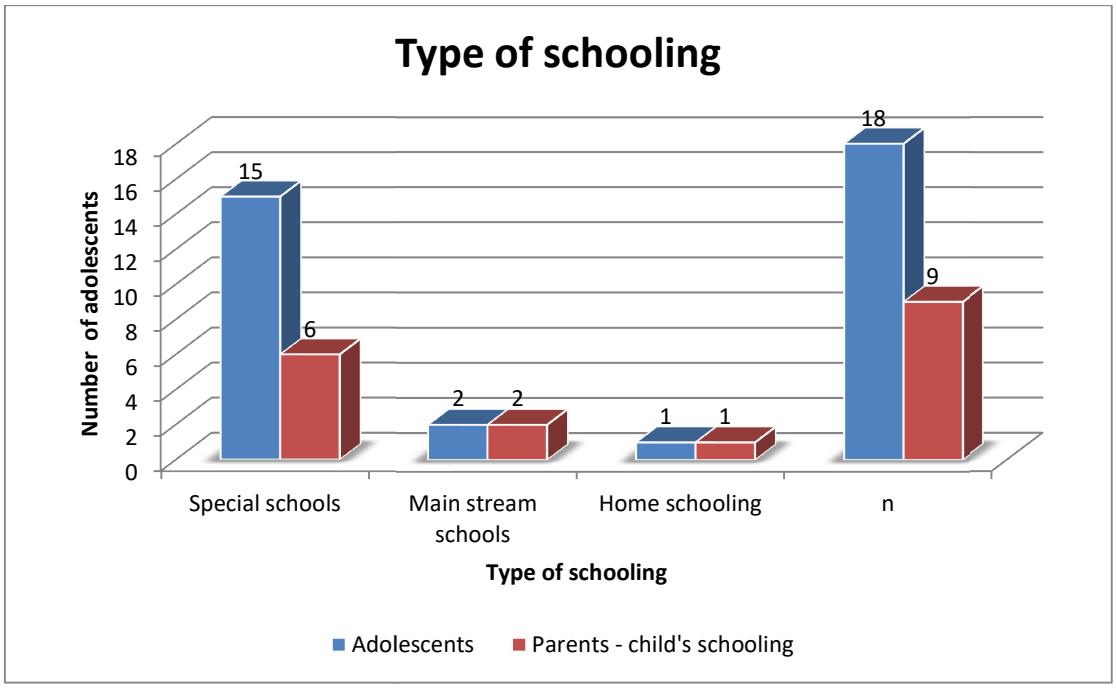

Figure 4-5 Type of schooling of adolescent participants and parent participants' children

4.2.5 Current interventions

The most common current intervention participants reported receiving was medical intervention in terms of medication for concentration difficulties. A few participants (22%) received occupational therapy or other behavioural interventions such as counselling by a psychologist or counsellor (6%) within the school context. Many of the participants had received various medical and behavioural interventions from the time of their diagnosis both within and outside of the school context, but many had discontinued the intervention as adolescents.

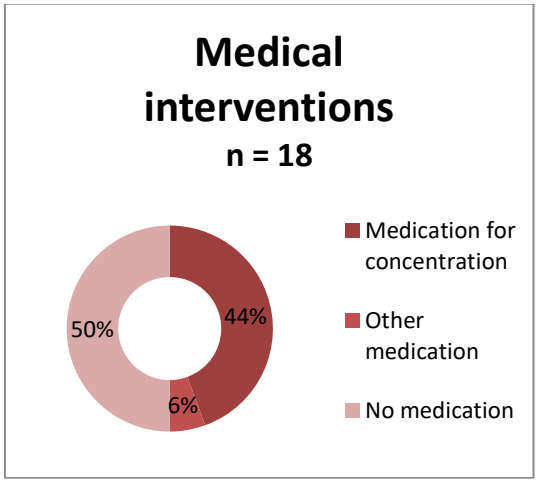

Figure 4-6 Current medical interventions of adolescent participants

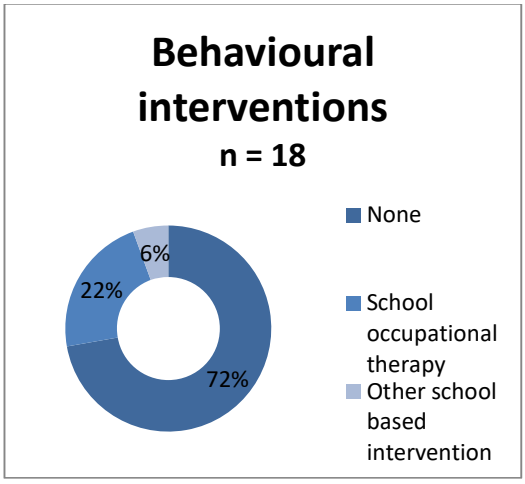

Figure 4-7 Current behavioural interventions of adolescent participants

4.3 Thematic Analysis of Data

In the following section the results regarding the thematic inductive analysis as well as the card sort activity will be presented.

4.3.1 Overview of Themes, Categories, Subcategories and Codes

Analysis of the data obtained in the focus groups with the adolescents and the interviews with the parents resulted in similar codes and categories and therefore the data were combined to develop themes. The following three themes were identified:

Theme 1: Current and anticipated future occupational performance priorities

Theme 2: Occupational challenges

Theme 3: Perspectives on intervention and support

Table 4.2. presents a summary of the themes, categories and subcategories:

Table 4.2: Themes, categories and subcategories

Theme	Category	Subcategory
1. Current occupational performance priorities (OPPs)	The adolescent perspective and developmental needs	• Feeling invincible • Future-orientation • Being socially connected
	Current occupational needs	• Productivity needs • Pleasure needs • Restoration needs • Balancing an occupational pattern
	Preparing for future roles	• Preparing for the worker role • Increasing and preparing for independence • Preparing for future pleasure and restoration needs • Preparing for relationship roles
2. Occupational challenges	Developmental difficulties	• Making decisions for the future • Skills for independence • Social difficulties
	Occupational difficulties	• Productivity difficulties • Restoration difficulties • Maintaining a balance of occupations
	Intervention-related difficulties	• Effects of medication • Psychological effects
3. Perspectives on interventions and support	Support and mentoring	• Emotional support and social acceptance • Family situation and stability • The right expectations
	Intervention	• Developing skills and making appropriate adaptations • Professional and medical interventions • Career guidance and exploration
	Promotion of self-esteem and self-worth	• Increasing motivation • Building self-esteem • Maturity / developmental process

Each theme is presented in more detail below, including the various categories, subcategories and codes along with appropriately demonstrative quotes from the interview and focus group transcriptions. The results from the prioritising of the card sort activity related to each theme are also presented under each theme.

4.3.2 Theme 1: Current and anticipated future occupational performance priorities (OPPs)

Table 4.3 contains the card sort activities most often prioritised by the participants as current OPPs in the categories of productivity, pleasure and restoration. The activities were weighted according to priorities assigned by the participants.

Table 4.3: Card sort ratings for current and anticipated future OPPs

Adolescents				Parents			
Priority	Current	Priority	Future	Priority	Current	Priority	Future
PRODUCTIVITY							
1	Studying	1	Studying	1	Studying	1	Studying
2	Attending classes	2	Doing a job	2	Organising time and things	2	Organising time and things
3	Doing a part-time job	3	Managing money and a budget	3	Attending classes Writing tests and exams	3	Doing a job or doing a part-time job Driving or learning to drive

PLEASURE							
1	Playing Games Listening to music	1	Getting married / spending time with your spouse	1	Spending time with friends	1	Spending time with friends
2	Attending a party Playing Sport	2	Spending time with family	2	Playing sport	2	Playing sport
3	Going on holiday Spending time with family	3	Playing games Spending time with friends	3	Dating Playing games	3	Dating
RESTORATION							
1	Eating	1	Eating	1	Sleeping	1	Religious activities Spending time with family
2	Taking a shower / other hygiene activities	2	Exercising	2	Religious activities	2	Cooking
3	Exercising	3	Religious activities	3	Spending time with family	3	Sleeping Cleaning room or house

Some of the activities chosen by the adolescents coincided exactly with those of the parents like studying as the number one priority for productivity and playing sport as the second most important activity for pleasure. Spending time with family in both sets of data were third but adolescents rated it as pleasure while parents rated it as restoration. The restoration category contained the most discrepancies between activities chosen by adolescents and parents – the adolescent activities focused more on maintaining physical health and self-care while parents' choices had a greater relation to psychological health. It is also interesting to note that dating and spending time with friends featured on the parents' top three list but not on the adolescents' top three. Activities chosen by

adolescents do however allude to spending time with friends as the activities chosen like attending a party or playing team sports usually include friends or peers.

The future OPPs chosen by adolescents and parents also reflected some similarities and some differences. Both adolescents and parents regarded studying as the most important activity and both included doing a job in the top three productivity choices. Pleasure activities differed, but both groups included a form of spending time with a (possible) life partner either dating or getting married. Spending time with friends was also regarded as important by both groups. Both regarded spending time with family as important but adolescents regarded it as a pleasure activity while parents regarded it as restoration. Parents chose sport activities as pleasure while adolescents rather selected exercising in the restoration category. In terms of restoration activities, both groups included religious activities. Parents regarded household management or instrumental activities of daily living (IADL) tasks like cooking and cleaning as an important part of restoration while adolescents chose eating which is a more basic activity of daily living (ADL) activity.

Although these prioritised activity lists give us some indication of what is thought to be important, it does not provide any information to assist in understanding why certain activities were chosen as OPPs. More information regarding the participants' motives behind these choices was determined in the thematic coding analysis. Table 4.4 presents the three categories with their related subcategories and codes identified in relation to adolescents' and parents' current occupational performance priorities:

Table 4.4: Current OPPs – categories, subcategories and codes

Theme 1: Current occupational performance priorities (OPPs)		
Category	**Subcategory**	**Code**
The adolescent perspective and developmental needs	Feeling invincible	• Unrealistic expectations • Thinking they know better • Increased immaturity
	Future-orientation	• Enjoying now vs. Focusing on the future
	Being socially connected	• Maintaining family relationships • Spending time with friends • Dating and romantic relationships • Animals are like friends • Meeting new people • Helping others and involvement in the community
Occupational needs	Productivity needs	• Completing schooling / education • Engaging in part-time employment
	Pleasure needs	• Having fun • A sense of accomplishment • Exploring new learning and activities • Enjoy adolescent care-free leisure activities before having adult responsibilities
	Restoration needs	• Restore and provide energy • Maintaining physical health • Maintaining psychological health • Diversion from unhealthy activities
	Balancing an occupational pattern	• Balance between busy and relaxing activities • Managing time is important for scheduling activities • Organising things is important
Preparing for the future	Preparing for the worker role	• A career decision and career planning • Learning skills for work success • Eradicating unrealistic expectations
	Increasing and preparing for independence	• Independence in utilising transport • Increased financial independence and management

		• Learning household skills
	Preparing for future pleasure and restoration needs	• Taking on more adult leisure activities • Professionalising leisure activities • Continued physical and psychological health maintenance
	Preparing for relationship roles	• Views regarding dating and preparation for a family • Anticipated changes in current relationships

I. The adolescent perspective and developmental needs

The first category included aspects of the adolescents' perspectives on their lives and their unique needs as a result of being in the developmental phase of adolescence.

Ia. Feeling invincible

Adolescents reported feeling invincible. They often had **unrealistic expectations**, underestimating the difficulty of future occupations like finding a job and overestimating their knowledge and experience - **thinking that they know better** than others. One participant explained it in the following way:

> *"(W)e (adolescents) think we know more than others. We think that we know them most like we better than each and every thing we can do anything. We more advanced. We don't have that apartheid area. We can get a job now. It's easier - that's how they think." (A18)*

A parent also commented on the **increased levels of immaturity** amongst adolescents:

> *"Die kinders van vandag verstaan nie, en ek sê die fout is, toe ek jonk was moes ek weermag toe gaan. En in die weermag het ek 'n volwasse mens geword." (P9b)*

("The children of today don't understand, and I say the problem is when I was young I needed to go to the army. And in the army I became an adult." (P9b))

Ib. Future-orientation

Some contrasting views were expressed on the future-orientation of adolescents. Some expressed the view that they needed to **focus on enjoying their current occupations** before the responsibilities of adulthood become a reality. Other participants were of the opinion that they needed to **focus more on the future** and consider the effect of current occupations and decisions on their future. One participant stated the importance of having a goal:

"(W)ant jy moet weet waar jy wil wees. Jy moet vir jouself 'n standaard sit. Jy moet werk om dit te kan doen." (A9)

("Because you need to know where you want to be. You need to set a standard for yourself. You need to work to do it." (A9))

A parent also commented on adolescents needing to focus on the future:

"Weet jy hulle word groter, hulle is meer ... selfstandig, hulle word ouer. Hulle gaan op hulle eie voete moet beginne staan, want ouers is daar, familie is daar om hulle te help, maar hulle gaan nie meer daai rustige lewe kan hê soos wat hulle altyd gehad het nie." (P8)

("You know they are growing up, the are more... independent, they are getting older. They will have to start standing on their own feet, because parents are there, family is there to help them, but they are not going to be able to have that relaxed life like they have always had." (P8))

Another adolescent communicated his view of focusing on enjoying his life now:

> *"(L)ike after school you started working and it's not as easy to just get off and go with your friends... Enjoy it now while you can." (A5)*

Some adolescents also commented on some of their peers' lack of future orientation:

> *"They don't think far enough ahead in a way, like they'll think next year I want to... They don't think in three years' time ok how will that affect how am I going to reach my goal in three years' time if I don't do it now." (A17)*

Ic. Being socially connected

Adolescents expressed the need to be socially connected and parents agreed on its importance. They firstly mentioned the importance of **maintaining family relationships**, especially with their parents and siblings as illustrated by one participant:

> *"(S)pending time with family is very important to me because I'm very family orientated so I enjoy spending time and getting to know each other more as a family and growing seeing my brother, my younger brother growing up and achieving his goals I enjoy that and being with my mom. Yes, I want to spend time with her until the last days, yes." (A18)*

Spending time with friends especially doing leisure occupations was the next important aspect stated as a means of being socially connected. Socialising with friends was also seen as an important activity for enjoyment and support as demonstrated by the following comment:

> *"Vriende is 'critical' in my lewe, hulle is altyd daar en ons geniet mekaar en ons geniet mekaar se geselskap." (A9)*

("Friends are critical in my life, they are always there and we enjoy each other and we enjoy each other's company." (A9))

One of the parents also explained socialising with friends' importance:

"Yes, and spending time with friends... For (A6) it has always been a mission but I've always wanted him to be sociably... He needs to be socially acceptable in the community." (P6)

Some adolescents viewed **dating and romantic relationships** as an important part of being socially connected while others did not regard it as a current need. The ones to whom it was important, regarded it as an important source of emotional support and emotional outlet.

"And dating ... it's very important ... because you need someone to talk to sometimes things you can't tell you parents but you can tell your partner. She can then give you advice like maybe you are not comfortable telling an adult but you know if you tell her she will try and understand and each and everything so dating is very important to me..." (A18)

Interacting with animals was also mentioned by various participants as being important. **Animals were likened to friends** by one participant.

"En diere, want op 'n manier help dit jou ook om te sê, diere is ook soos vriende op 'n manier vir my. Dit bring iets anders uit jou uit om te kan help en so aan." (A9)

("And animals, because in a way it also helps you to say, animals are also like friends in a way to me. It brings something else out of you to be able to help and so on." (A9))

Some participants expressed the need **to meet new people** mainly as a function of exploring new interests and activities thus connecting with peers that have differing interests from their current circle of friends. One participant explained:

"Om nuwe mense te ken en te weet wat en nuwe dinge te probeer iets soos dit, want as jy net in dieselfde boksie bly gaan jou boksie nie gaan groter wees nie." (A1)

("To know new people and to know what and to try new things something like that, because if you stay in the same box, your box will not become bigger." (A1))

Helping others and involvement in the community was stated by various participants to be important to them. It was viewed as a good thing and they also stated that in future they would like to be involved as a means of giving back to the community:

"Like helping my community where I come from is very important because I know some kids are not as privileged as I am and disadvantaged so going back where my ground's at, where my blessings' at. Giving is a blessing so giving back to my communities who is going to help me in the future. So it's number one for me. It's going to I'm going to enjoy it, seeing the youth growing up and becoming someone someday it's going to make a huge impact in me to go and push more, to help others." (A18)

The second category in the theme contained perspectives on adolescents' current occupational needs.

II. Current occupational needs

A variety of OPPs were described fitting into the categories of productivity, pleasure and restoration as well as the importance of balancing occupations into an appropriate and healthy occupational pattern.

IIa. Productivity needs

Participants stated two main areas of productive occupations that they felt were important. The first of these was **completing their schooling** and engaging in appropriate **education** and training to support their future careers. Doing well in school was viewed as a prerequisite for finding a good job in future, as stated by one participant:

> *"Ek dink ook as jy nie skoolgaan nie en jy doen nie goed in skool nie hoe gaan jy dan eendag 'n goeie werk kry?" (A15)*
>
> *("I also think if you don't go to school and you don't do well in school how are going to get a good job one day?" (A15))*

One participant also stated the importance of focusing on completing school activities now in order to be able to progress to other productive activities later:

> *"Because right now that's important, is to learn, learn, learn, be in class and study to.... be done, and move on to a new venture, whether it's taking a break, going to varsity, or just exploring jobs." (A3)*

Parents supported these views and added on the importance of some activities that specifically assist them due to their learning difficulties:

> *"Attending classes... because he doesn't study, so if he attends classes and he listens and learns he doesn't have so much to study – that's it." (P6)*

Engaging in part-time employment was the other group of productive occupations that was important to some adolescents and supported by parents, especially due to its potential for financial rewards and increased independence and being meaningfully occupied:

> *"But it depends on whether you want learn to be independent, and it's good to have a part time job... So you don't have to be under your parents' fingers you know, yes." (A6)*

> *"No, having a part-time job I think it's important for many schoolchildren. They don't sit and be idle." (P6)*

IIb. Pleasure needs

Process-orientated occupations or occupations that fulfil the need for experiencing pleasure were also described as important by participants. Some occupations were chosen as priorities due to the participants' experience of **having fun** when engaging in these activities. Many of these activities contained elements of self-expression and pleasurable sensory experiences.

> *"Everyone, I think, turns to it (art) a lot... I think drawing is a good way to express yourself, or whatever you want to say - doing art is a nice way of expressing that. Yes, and it doesn't necessarily mean you want to do it for being an artist or something but just because, just because it's nice." (A3)*

Although these activities were mostly engaged in for enjoyment, some of the activities were viewed as important to achieve some form of a goal usually as a means of providing **a sense of accomplishment** outside of school-related activities.

Exploring new learning and activities were also stated as pleasurable activities for adolescents. One parent explained the benefits of playing games in terms of exposure to new information:

> *"Hy't nou begin rugby speel, hy't nog nooit in sy lewe rugby gespeel nie, maar hy ken die posisie wat hy nou in rugby speel, hy weet wat hy moet doen. Oordat hy dit altyd speel op die PlayStation, en hy kyk dit op die TV..." (P9b)*
>
> *("He now started playing rugby, he has never played rugby before, but he knows the position that he now plays in rugby, he knows what he needs to do. Because he has always played it on the PlayStation, and he watches it on TV..." (P9b))*

The importance of enjoying **care-free leisure activities before having to take on adult responsibilities** was another expressed priority.

IIc. Restoration needs

Participants often referred to the importance of activities that **restore or provide energy**. Activities that **maintain physical health** were a priority and included a variety of self-care activities like eating and personal hygiene as well as activities for promoting fitness and sleeping. Some participants explained these as follows:

> *"Hulle moet oefeninge kan doen om fiks te bly... My kinders moet gesond kan wees. Hulle moet gesond kan lewe. Hulle moet gesond kan eet. Hulle moet oefeninge doen om hulle, soos bloeddruk, suiker, al daai goete tipes van siektes af te hou en te stabiliseer." (P8)*

> *("They have to be able to do exercises to stay fit... My children must be able to be healthy. They must be able to live healthy. They must be able to eat healthy. They must be able to do exercises to keep away and stabilise blood pressure, sugar, all those types of illness." (P8))*

> *"Some people just enjoy sleeping, like myself, but it is a good source of gaining energy. You need to sleep to get energy as well." (A3)*

Maintaining psychological health was also stated to be important and included relaxing activities with various levels of activity from quiet reflective activities to active energetic activities with various levels of social interaction.

> *"Being in nature because I feel like I have much more energy when I'm in nature. When you hike you obviously gain energy, camping in the wild." (A17)*

Parents also agreed and explained that various leisure activities also provide psychological restoration:

> *"Weet jy hulle ysskaats ook, dis ook maar onder sport. Hy't vir my nou die aand gesê, hy sê: "As ek ysskaats mamma, dan's dit bietjie 'me-time'". Hy is so op die ysskaatsbaan en hy gaan net en gaan net. Hy sê hy dink aan so baie dinge, hy't ook daai 'me-time' nodig." (P9a)*

> *("You know what, they go ice skating as well, that is also sport. He told me the other night, he said: "When I ice skate mom, then it's a bit of me-time". He is on the skating rink and he just goes and goes. He says he thinks about so many things, he also needs that me-time." (P9a))*

One participant commented on the importance of activities that provide **diversion from unhealthy activities** that may include risk behaviour.

> *"I think sports are a very good for me... and I'm away from all these bad things like alcohol, smoking, I mean on weekends so it's good for me. " (A18)*

IId. Balancing an occupational pattern

The importance of having a balanced occupational pattern was stated by many participants. It was mainly explained as needing a **balance between busy and relaxing activities** as illustrated by the following quotes:

> *"(T)o have a good, healthy balance between busy, busy, and then relaxing and doing something that just has a balance." (A3)*

> *"...(J)y moet jouself geniet, na werk. Jy kan nie die heeltyd werk nie, jy moet jouself geniet anders gaan jy net soos roes as ek dit so kan stel." (A9)*

> *("...You need to enjoy yourself, after work. You can't just work all the time, you need to enjoy yourself otherwise you are just like going to rust if I can put it like that." (A9))*

Many parents agreed, as one stated:

> *"(E)k sal byvoorbeeld vir (A10) sê, as ons leer: "Nou stop ons, nou gaan jy dans", want ek voel die brein moet 'n bietjie suurstof kry... So dit en dat hy nie so in die huis bly die hele tyd nie... Ja, ek voel 'n mens moet gebalanseerd wees. Jy kan ook nie net een ding doen nie." (P10)*
>
> *("I will for example tell (A10), when we are studying: "Stop now, now you are going to dance", because I feel the brain must get a bit of oxygen... So that and that he doesn't stay at home all the time... Yes, I feel one needs to be balanced. You can't just do one thing." (P10))*

Managing time was regarded as an important aspect for scheduling and achieving a balance between various productive, pleasurable and restorative occupations. Along with that **organising things** were also often included to be important in being effective in especially productive, but also in other occupations. One adolescent and parent participant elaborated:

> *"If you don't organise you can't do things properly you won't even you won't be productive at all or everything will be sort like a breeze for you and others have to try and follow up behind you and fix everything." (A17)*
>
> *"(H)ulle het baie goed op hulle kerfstok en dit is partykeer vir hulle moeilik om te sê ek moet nou hierdie los om eerder daai te doen." (P10)*
>
> *("They have a lot of things on their plate and it is sometimes difficult for them to say I must now leave this and rather do that." (P10))*

III. Preparing for the future

IIIa. Preparing for the worker role

All participants agreed that doing a job will be an important OPP in future. Perspectives on **making a career decision and the process of career planning** were somewhat varied though. Some participants emphasised the importance of making a final career decision while still at school:

> *"...(J)y moet uitvind wat jy wil doen. Ek het al gaan job shadow by 'n paar werke en dit het my gehelp. Ek weet nou waarnatoe ek wil gaan en waarnatoe ek werk." (A9)*

> *("... You have to find out what you want to do. I have gone to job shadow at a few jobs and that has helped me. I know now where I want to go and what I want to work towards." (A9))*

Others expressed the need to postpone a career decision in favour of gaining more life experience, self-awareness and more immediate gratification. One participant explained:

> *"I'm going overseas first to see what's happening out there and then I'll come back and study for I've got no idea what I'm going to do..." (A5)*

> *"It's all about I want a job next year. They think like that: "I want to get a job get a salary". They're not thinking about the long term process. "Get a salary and party on the weekends have fun with my friends and get back on Monday with my job. On weekends party, maybe I will study in five years' time". That's how they think. "In five years' time I'll study again" and probably they won't." (A18)*

The importance of seeking further education and training to gain qualifications that would improve their chances of being employed and the possibility of finding a better job were also highlighted:

> *"...(S)tudying because if you don't study the odds are you'll never get a proper job in the current world anywhere. No matter what country, studying is also very important to keep yourself productive. Knowing what you are going to do to have the right qualifications..." (A17)*

Some parent participants also elaborated on the importance of experiential activities to assist with a career decision. **Learning skills that would contribute to finding employment and to work success** were mentioned to be essential for preparing adolescents for the worker role. Activities that helped with this included both school-related activities like practicing to do speeches, but gaining work experience through part-time employment or job observation experiences were viewed as the main avenue for this.

> *"So ek sal sê hy gaan 'n werkie moet, weet, al as dit 'n tydelike werk, skool vakansie werk. Dit hoef nie 'n volle dag se werk te wees nie, maar hulle moet 'n werk hê om te kan beginne leer, om aan te kan beweeg." (P8)*

> *("So I will say he will need to do a job, you know, even if it is just a temporary job, school holiday job. It doesn't have to be a full day's work, but they will have to have a job to start to learn, to be able to move on." (P8))*

Eradicating unrealistic expectations about a career was also stated as important to assist in finding a job and adjusting to the working environment.

> *"Die outjies kom daar aan, hulle wil begin werk op R30 000. Dis omdat hy nou 'n graad het, maar hy weet niks nie... Hy stel nie belang in iets onder R30 000 nie omdat hy 'n meganiese graad gaan hê. En daai outjie gaan nie werk kry nie." (P9b)*

> *("The young guys arrive there, they want to start on R30 000. It is because they have a degree, but he knows nothing... He is not interested in anything under R30 000 because he is going to have a mechanical degree. And that guy will not get a job." (P9b))*

IIIb. Increasing and preparing for independence

Participants expressed adolescents' need for increased independence as enabled by various emerging occupations as well as the need to learn skills that will promote independence in future. **Independence in utilising transport** including being able to drive was viewed by participants as emerging occupations providing adolescents with increased independence as well as preparing for future independence. It was also mentioned that being able to drive could add to career opportunities where work duties may include the driving of a vehicle. As one adolescent commented:

> *"If you learn how to drive in future, you can drive your own car. No one has to drive you around." (A11)*

Another area of preparing for greater independence mentioned was **increased financial independence and management.** Earning some pocket money was regarded as a way to independently provide for some of the things they desire while preparing for providing for survival needs in future. Learning to manage their money and budgeting were stated to be important aspects, not only of personal independence but also for managing a business:

> *"I need to learn how to manage money for the future for the sake of my kids if I have kids and family. If I have like a good amount of money we can all have fun together, so managing money is very important ..." (A17)*

> *"Dit was net, hy weet om met geld te werk, maar sodra hy met 'n besigheid begin, 'managing budget' en geld is 'n baie groter verantwoordelikheid in 'n besigheid." (P8)*
>
> *("It was just, he knows how to work with money, but as soon as he starts with a business, managing budget and money becomes a much bigger responsibility in a business." (P8))*

Learning household skills like cooking was another aspect of increasing independence that was mentioned and is viewed as important for independence in future, as illustrated by the following comments:

> *"En dan ek dink sy sal selfstandig te wees en gaan vir haar self kan sorg, sy gaan haar eie huis moet kan skoonmaak." (P1)*
>
> *("And then I think she will be independent and will go and look after herself, she will have to clean her own home." (P1))*

IIIc. Preparing for future pleasure and restoration needs

Some changes to adapt to pleasure and restoration needs were anticipated by participants. Participants thought that there will be a need to **take on more adult leisure activities** as one participant commented:

> *"... I've said watching TV because you've left out partying, you've left out going out to amuse your friends that's all gone already... And ... gardening because like I've said you had partying when you young now you have to replace partying with something and gardening, going out, nature, holidays that's all put in to your element..." (A4)*

The **professionalising of some leisure activities** was also mentioned as an option possibly becoming paid employment, as stated by one participant:

> *"Sometimes like when you are older if you doing it now for pleasure maybe you get so good at it now that when you get older it becomes your main income..." (A5)*

Many participants mentioned the importance of **maintaining their physical and psychological health** in future. It was thought that as they get older, eating healthy would become more important for physical health due to lower tolerance of unhealthy eating habits. One participant explained it as follow:

> *"Well the first one I've said is eating good because in a youth you can eat as much as you want to... But when you get a bit older it will start hitting you like you sluggish you will get sick easily. So junk foods I think start falling away because what's the use." (A4)*

Maintenance of physical health was regarded as supporting both psychological health and productive occupations for achieving goals, as demonstrated by the following comment:

> *"(I)f you don't have a healthy body you don't have a healthy mind and then basically if you don't have a healthy mind every other goal that you ever had will never be achieved. No matter what happens." (A17)*

IIId. Preparing for relationship roles

Adolescents' views of the importance of **dating and romantic relationships for preparing for a future family** were an area where contrasting views were expressed. Some adolescents

were said to engage in relationships for the current enjoyment without much thought of its influence on the future. Others stated it as part of preparing for having a family in future. A third category of adolescents preferred the freedom of remaining unattached and postponing romantic relationships to the distant future. Some comments that illustrated these views were:

> *"I think people just look for a relationship just to be in one. Just to say 'I have a boyfriend'... Others just need to be in a relationship but they're not ready for such a commitment." (A3)*

> *"Like it is fun to date but by dating I have a goal I want to get somewhere because I am very family orientated. I want to get somewhere with my spouse my partner, so by dating we get closer." (A18)*

> *"Yes after school when I want to go overseas I don't want to worry about having a girlfriend things like that. I just want go and enjoy myself first." (A5)*

Some parents reported to encouraging adolescents to not be too serious about dating relationships while still at school, but dating was generally supported by parents as preparation for future relationships. Parents generally commented more on the emerging importance of dating after school as the first steps toward starting a family, but also acknowledged that it might be a greater priority to the adolescents than to themselves:

> *"Sy kan seker maar begin 'date' dan dink ek... Hulle wil seker maar begin uitgaan om eendag 'n man te kry en seker maar trou as jy 'n vroutjie is wees... Seker belangrik wil seker nie hê my kind moet alleen wees eendag nie, ja." (P1)*

("I suppose she can probably start to date then I think... They will probably want to start going out to one day get a husband and to marry if you are a woman... Probably important, probably don't want my child to be alone one day, yes." (P1))

Participants anticipated that being socially connected will remain important in future, but that there will be **changes in their current relationships**. For instance time and opportunities available to socialise were anticipated to change. Maintaining relationships with family and friends were anticipated to be important in future. Family was seen as a form of stability through all the anticipated changes taking place in transitioning to adulthood, as one participant explained:

"... (S)pend time with family and friends because time's over a few years later. You mean parties, you will be too old so with family and friends stick with them because they the only ones that will be there for you at the end of the road at the end of the day, so yes."(A4)

Meeting new people was also anticipated to be important in future as changes in environments will necessitate.

4.3.3 Theme 2: Occupational challenges

Participants were asked about adolescents with LDs' current occupational challenges. Table 4.5 presents the activities from the card sort that was most often referred to by participants as current challenging activities:

Table 4.5: Current occupational challenges

Ranking	Adolescents	Ranking	Parents
1	Organising time and things	1	Studying
2	Studying	2	Writing tests and exams / Organising time and things
3	Writing tests and exams	3	Watching TV / Cleaning room or house
4	Doing a speech / Exercising	4	Doing projects / Spending time with friends / Washing dishes / Taking medication / Exercising

Adolescents mainly selected productivity-related activities. Parents listed many of the same productivity activities, but their list also contained more varied activities including IADL activities like cleaning their rooms and social activities like spending time with friends.

Table 4.6 contains the details of the categories, subcategories and codes regarding the current occupational challenges experienced by adolescents with LDs:

Table 4.6: Occupational challenges – categories, subcategories and codes

Theme 2: Occupational challenges		
Category	**Subcategory**	**Code**
Developmental difficulties	Making decisions for the future	• Difficulty making a career choice and training options
	Skills for independence	• Managing money and a budget • Mastering household management skills
	Social difficulties	• Difficulties with peer relationships and peer pressure • Social pressures: Being sheltered and exposure to risk behaviour • Difficulties with family relationships • Difficulties with teacher and school staff interactions
Occupational difficulties	Productivity difficulties	• Low motivation and interest • Cognitive and process skills deficits • Reading, writing and language difficulties • Planning and organisation difficulties • Schools not allowing for technological adaptations • Difficulty finding a part-time job
	Pleasure difficulties	• Too many passive leisure activities
	Restoration difficulties	• Sleeping and level of arousal difficulties • Stress and anxiety management difficulties
	Maintaining a balance of occupations	• Finding a balance of occupations and a satisfying occupational pattern • Too much vs. too little time spent in various productive, pleasurable and restorative activities

Table 4.7: Occupational challenges – categories, subcategories and codes (continued)

Category	Subcategory	Code
Intervention-related difficulties	Effects of medication	• Negative influence on appetite • Impact on socialisation • Influence on personality • Needing increased dosages
	Psychological effects	• Uncertainty regarding effectiveness • Overload of therapies • Negative influence on self-esteem • Acceptance of difficulties and associated recommendations

I. Developmental difficulties

Ia. Making decisions for the future

Participants, especially the older adolescents, reported **difficulties with making a career decision** as well as deciding on the appropriate **training options** for a chosen career. Participants stated that extra pressure to make the right decisions added to the difficulty of making these decisions. One participant explained it as follows:

> *"Studying because obviously now you thinking what do you want to do next year or in the future as well as with it being matric... So everything together, pressure of trying to figure out where you want to go next year, which one's better what course, if that job is actually going to make you happy..." (A17)*

Ib. Skills for independence

Skills for increasing independence were another area where especially adolescent participants highlighted difficulties. Many participants mentioned difficulties with **managing money and a budget**. Difficulties related mainly to impulsive and undiscerning purchases. **Mastering household management skills** like cooking was another concern for some adolescents, but more generally the lack of cleaning and tidying at home. Misplacing things like keys were another mentioned difficulty as explained by one participant:

> *"Nee, skoolboeke en dit, dis nie soort van 'n probleem nie. Dit was toe ek jonger was... Dis kar sleutels, selfone... huis sleutels. Kan nooit onthou waar ek hulle sit nie... Laat noem ons gister. Toe het ek die kar se... die huis sleutels op die windowsill buite. Maak my ma my wakker. Vra sy my waar's die sleutels? "Dit is in die kombuis" en meantime was dit buite." (A8)*
>
> *("No, school books and such, it is not sort of a problem. It was when I was younger... It is car keys , cellphones... house keys. Can never remember where I put them... Let us name yesterday. I left the car's... the house keys on the windowsill outside. My mom wakes me. She asks me where is the keys? "It is in the kitchen" and meantime it was outside " (A8))*

Ic. Social difficulties

A variety of social difficulties were mentioned by participants. Firstly mention was made of **difficulties with peer interactions**. Some mentioned not having a lot of friends while others mentioned difficulties with social skills during group work as further explained by the following comment:

> *"I'm very opinionated and argumentative, so I can attack any topic... I also don't know how to accept someone else's opinion sometimes..." (A3)*

Parent participants stated concern regarding the **social pressures** that adolescents experience. E**xposure and possible engagement in risk behaviours** like drug abuse and being sexually active were some of these voiced concerns. Others felt that their children were sheltered and might be confused due to not fitting the general social portrayal of a teenager:

> *"Hulle druk is honderd maal meer as wat ons druk was... En selfs oor simpel goeters soos om seksueel aktief of om... hulle het nie die... dit is eintlik veronderstel om nou al in hulle verwysingsraamwerk te wees nie maar hulle word gekonfronteer daarmee. Ek meen ek sien in hulle, in die tipe LO take en goeters wat hulle kry en vir... asof dit normaal is dat alle tieners is seksueel aktief. En dit is nie normaal nie, dit is nie veronderstel om so te wees nie. En dan voel hulle half maar as ek nie so is nie, is ek eintlik die abnormale een. Omdat ek nie so is nie. En dan dit maak hulle deurmekaar..." (P10)*
>
> *("Their pressure is hundrend times more than what our pressure was... And even about simple things such as to be sexually active or to... they don't have the... it is actually not supposed to be in their frame of reference at this stage but they are confronted with it. I mean I see in them, in the types of LO tasks and things that they receive and for... as if it is normal that all teenagers are sexually active. And it is not normal, it is not supposed to be so. And then they sort of feel but if I am not so, am I actally the abnormal one. Because I am not so. And that confuses them..." (P10))*

Although **family relationships** were reported to be important to most adolescents, some reported family arguments and feeling that they spend too much time with their families, as two commented during a focus group:

> *"Spending too much time with your family become too much of a hassle... When you want to go somewhere..." (A7)*
>
> *"Yes and they fight like a family arguments" (A2, adding on to A7's statement)*

Some parents stated adolescents' poor social judgement and egocentrism as adding to strained relationships. They also stated that the unavailability of parents to talk to adolescents in some families present significant risks for involvement in risk behaviour:

> *"Soos ek sê hierdie goed is belangrik, maar ek dink regtig mense moet kommunikasie hê. Daar moet kommunikasie wees somewhere nog, al is hulle tieners en hulle wil nie. Hulle moet en die ouers is te besig." (P10)*
>
> *("As I say these things are important, but I really think people must have communicaton. There should still be communication somewhere, even if they are teenagers and they do not want to. They must and the parents are too busy." (P10))*

Various participants, especially the adolescents commented on **difficult interactions with teachers and school staff**. Pressure to perform school work and perceived unreasonable expectations were some of the main reasons stated for strained interactions. The following comment illustrates this:

> *"... (E)veryone's pressuring you to do well and all the teachers are saying that you need to start doing old papers now. They don't realize that there's seven other subjects telling us the same thing." (A17)*

Parents also commented on previous experiences of teachers not understanding LDs and demeaning children in class:

> *"(D)ie juffrou in die Laerskool waar hy was, het sy boek, so hy's obviously disleksie... het sy boek so opgelig: dit is hoe julle nie moet werk nie in die klas. Hom so verneder..." (P9a)*
>
> *("(T)he teacher in the Primary School where he was, took his book, so he is obviously dyslexia... lifted his book so: this is how you should not work in the class, shamed him so..." (P9a))*

II. Occupational difficulties

IIa. Productivity difficulties

Various productivity-related difficulties were mentioned by the participants. Firstly participants stated that they had **low motivation and interest** in doing school work and studying at home. As one participant explained:

> *"Ek sukkel om te studeer want dit is soms vervelig, en dit verveel my en dit is nie altyd lekker om te gaan studeer nie. Maar jou konsentrasie gaan ook vinnig weg as daar ander goed is wat jy wil doen. En dan moet jy nou gaan staan en studeer en soos jy wil buite wees... Ek weet nie, ek like dit nie baie nie." (A9)*
>
> *("I battle to study because it is sometimes boring, and it bores me and it is not always pleasant to go study. But your concentration also goes away quickly if there are other things that you want to do. And then you must go and study now and like you want to be outside... I don't know, I don't like it much." (A9))*

Cognitive and process skills deficits caused difficulties with engaging and completing mainly school-related tasks. These included inadequate concentration, memory and endurance as well as slow work speed as illustrated by the following quotes:

> *"Ek dink ook nog 'n probleem half is dat ek partykeer konsentreer maar dan verloor ek die konsentrasie maklik of soos dit." (A10)*

> *("I think also, another problem sort of is that sometimes I can concentrate, but then I lose the concentration easily, or like that." (A10))*

> *"When I study and then the next day I can't remember what I studied and then I can't study." (A13)*

Multi-tasking difficulties were especially mentioned by parents:

> *"(A6) can't multitask. (A6) is not able to multitask. If you give him more than one task at a time – he will do none..." (P6)*

Difficulties with various skills like **reading, writing and language difficulties** were also mentioned to add to their difficulties with productivity tasks and ability to achieve at school work, as one participant stated:

> *"Ek sukkel baie met tale. Ek verstaan nie altyd, ek verstaan maar en sukkel om te spel, ek kan nie spel nie." (A9)*

> *("I battle with languages a lot. I don't always understand, I understand but struggle to spell, I cannot spell." (A9))*

Written expression was mentioned as being especially difficult:

> *"But, he just battles to do essays, like History, they are very rudimentary... Putting thoughts on paper, it is about taking what is in his mind and putting them on paper..." (P16)*

Planning and organisational skills that included time management and organising things were also an area of great difficulty.

> *"I think that's all about time and things are also very bad because we as teenagers, I know we like taking our time and we're always going to leave it for that day and then we leave it like for or then we only do it like a week after because we always suck with time... Like with our projects and stuff... We only do it the day before." (A15)*

These skills, especially time management, were also stated to influence the management of daily routines for getting ready for school:

> *"It is just time – time. I will, while I'm eating I'll be getting everything else ready. (A6) will boil a kettle and then, when he begins to get everything ready and then he'd have to re-boil the kettle." (P6)*

Another challenge was **schools not allowing for technological adaptations** that would assist in school-related tasks like writing:

> *"It has changed his life, just being able to type these things and if the school would allow it. If he could write an essay by typing it, he would be much better off than writing it and I'm sure his marks will show that...*

Yeah it's like saying that his essay would be completely different typed out rather than hand written, but schools don't allow that." (P16)

Difficulty with finding a part-time job was the only productivity challenge not related to the school environment that was mentioned. Discrimination due to their LD was stated as a contribution to this challenge.

IIb. Pleasure difficulties

Some parents expressed a concern that their child was engaging in too much passive leisure activities, as one explained:

"That's the only thing that I have problems with, is playing games. He's also watching TV but it's the same thing." (P6)

IIc. Restoration difficulties

Struggling to fall asleep was the only restoration-related activity that was stated as being difficult at times, but it wasn't reported to have a significant influence on other activities or areas of occupation:

"Party aande sê hy vir my hy sukkel om aan die slaap te raak." (P9a)

("Some nights he tells me he battles to fall asleep." (P9a))

Difficulties with **managing stress and anxiety** in turn affected school-tasks especially when tasks had specific time limits e.g. tests and examinations.

"Ek dink dis ook as die juffrouens sê daar is soveel tyd dan dink jy, dan konsentreer jy dan vergeet jy half." (A10)

("I also think it's when the teachers say there is so much time, that you think, then you concentrate and then you sort of forget." (A10))

Managing busy sensory environments was also stated to be a difficulty related to this:

"Yes, and I think it is just all too much, because essentially he has got sensory things that become all too much for him. So I would say the party is something he struggles with, he doesn't think he does, but he does." (P16)

IId. Maintaining a balance of occupations

Participants stated that they struggled to **find a balance between various occupations and to manage a satisfying occupational pattern**. One participant explained:

"It was kind of like... I don't know. I had to make a new balance with this, running and doing a little bit of stuff, and then work. It's not as intense. It's not so busy but it is still a little bit less crowded, if I can say but I like being crowded." (A3)

Some participants spent **too little time in school-related tasks** while others reported to spend **excessive amounts of time and effort preparing tasks** like projects and speeches as demonstrated by the following quotes:

"Wel, ek is te lui om te studeer... Ek wil in my vrye tyd begin studeer nie... Ja, as ek begin studeer is ek happy... (ek sukkel) net begin studeer kry." (A8)

> *("Well, I am too lazy to study... I don't want to start studying in my free time... Yes, when I start to study I am happy... (I just struggle) to start to get to begin to study." (A8))*

Vs.

> *"Want ek kan glad nie net 'n boek oop maak en leer nie. Ek moet letterlik al 'n maand voor die tyd opsom en leer voor ek dit eintlik ken... My ma. Sy sit saam met my 12 uur in die aande sodat ek kan leer ensovoorts." (A10)*

> *"Because I can absolutely not just open a book and study. I have to literally summarize a month before the time and study before I know it eventually... My mother. She sits with me 12 o'clock in the night so that I can study et cetera." (A10)*

Spending **too little time in pleasurable and restorative activities** was another difficulty reported in terms of balancing an occupational pattern. Some reported it due to lack of motivation while others reported that it was due to pressure to spend more time on productive school tasks. A participant explained as follow:

> *"I've kind of removed myself from what I enjoy doing, especially at school because eisteddfods and all these things – I'm all up for it. Again, they just work you up about being in school and being in matric. They just work you up so much that it likes isolates you from the stuff that actually helps you to relax or be calm, or just be yourself and just not stress so much." (A3)*

Parents were also concerned that adolescents spent **too little time doing active restorative activities like exercising**. Some reported it due to lack of motivation. One parent explained:

> *"Well, I've just enrolled him at a gym. It's the 21st today. He hasn't been once this month, and he begged me please join him and he just doesn't do it ." (P6)*

III. Intervention-related difficulties

Mainly the parent participants commented on difficulties arising from the intervention process, although there were some adolescents who also referred to these.

IIIa. Effects of medication

Firstly the effects of using medication for focus and concentration were mentioned. The **negative influence on their appetites** was one concern and was associated with lowered body weight:

> *"If he's not taking his medication he's fine with eating. If he's taking his medication he eats little... You can't really do anything. You can't force him to eat, he won't eat although he tries..." (P2)*

Parents also stated that the medication had a **negative impact on their children's socialisation**, it **subdued their children's personalities** and it required a **constant need for increased dosages** to remain effective:

> *"(E)k dink net nie ... Ek wil nie sê die medikasie dink ek nie het my kind gehelp nie. Dit het haar dalk in die begin gehelp want sy't gevoel daar is 'n verskil en sy't eintlik haar werk doen en sy kom nie in die moeilikheid nie maar na omtrent 'n jaar moes hulle die dosis aanpas en dit het ook nie*

gewerk nie want dit het heeltemal... So half asof sy.... Wil nie sê sy weggeraak het nie maar dis asof sy net weggeraak het..." (P1)

("I just do not think... I do not want to say that the medication I think has not helped my child. It probably helped her in the beginning because she felt there was a difference and she actually did her work and she did not get into trouble but after about a year they had to adjust her dosage and that also did not work because it completely... Sort of as if she... Do not want to say that she faded away but it is as if she just faded away..." (P1))

IIIb. Psychological effects

The psychological effects of being part of the intervention process were also stated to add to some of the difficulties experienced. Firstly parents felt **uncertain regarding the effectiveness of various interventions** especially because progress was slow and results often long delayed:

"Miskien is daar ... miskien is alles al die klein goedjies wat jy gedoen het gee jou later resultate. Of miskien as jy niks gedoen het nie sou jy nog steeds dieselfde resultate gekry het. Ek kan nie sê nie... Maar ten minste kan ek vir jou sê ons het iets probeer... Ek dink dit het, ek dink dit is net sulke klein inkremente want 'n ou raak eintlik moedeloos want jy sien nie regtig 'n groot verbetering nie... Dis baie moeilik hoor want ek kan nie sê – probeer maar alles en kyk wat werk ..." (P1)

("Maybe there is, maybe everything all the small things that you did, gave you results later. Or maybe if you did nothing it would have still given you the same results. I cannot tell... But at least I can tell you we have tried something... I think it has, I think it is just in such small increments because one actually gets discouraged because you do not really see a big

improvement... It is very difficult because I cannot say – just try everything and see what works..." (P1))

Parents further reported an **overload of therapies** which left them tired and discouraged:

"Ek weet nie of daar nog iets is wat ons kan doen regtig wat... Daar is seker maar dit... Ek is half moeg. Ons het regtig nou van babatjie tyd, van drie jaar af, doen ons nou al alles wat ons kan doen en weet 'n mens moet op 'n punt kom waar jy nou maar net nie meer doen nie. Ek is maar net, miskien is ek net moeg. Ek weet nie, maar ek dink hy is ook moeg." (P10)

("I do not know if there is something else that we can do really that, there probably is but it... I feel sort of tired. We are really from when he was a baby , from three years old, we are doing everything that we can do and know one gets to a point where one just do not do anymore. I am just, maybe I am just tired. I don't know, but I think he is also tired." (P10))

Parents also felt that the process had a **negative influence on their child's self-esteem**:

"So ons het al baie goed probeer ons het... Ons het op 'n stadium waar 'n ou kom wat jy nou op 'n stadium is wat jy net voel hierdie arme kind voel daar is iets fout met haar en dit lyk nie of ons ooit daardeur gaan kom nie." (P1)

("So we have already tried many things we have... We have at a stage where one gets that you are now at a stage that you just feel this poor child feels there is something wrong with her and it seems that we are not ever going to get through this." (P1))

Lastly it was stated that it was sometimes difficult to **accept their child's difficulties and associated recommendations** regarding for instance school placement.

4.3.4 Theme 3: Perspectives on effective interventions and support

The last theme centred around the participants' perspectives on interventions and support and these views will be presented in the next section.

The following Table 4.7 lists the main sources of support that participants mentioned during the interview with the ranking based on how often the specific support was mentioned across interviews and focus groups.

Table 4.7: Main sources of support mentioned

Ranking	Adolescents	Ranking	Parents
1	Teachers	1	School environment
2	Mother	2	Parents / Mother
3	Friends	3	Self-determination / Psychologist or counsellor / Teachers
4	Parents / Other family members / Occupational therapist	4	Coach / Occupational therapist

A summary of the categories, subcategories and codes from the inductive content analysis can be found in Table 4.8:

Table 4.8: Perspectives on interventions and support – categories, subcategories and codes

Theme 3: Perspectives on interventions and support		
Category	**Subcategory**	**Code**
Support and mentoring	Emotional support and social acceptance	• To be heard and understood • Someone believing in you • Recognition as an individual • Universality – someone experiencing the same problems • Advice and assistance in solving problems • An integrated support system • Being socially well integrated
	Family situation and stability	• Having a stable home and supportive parents • Importance of shared family activities • Managing sibling competition / comments
	The right expectations	• Expectation to perform according to my potential • Not too much pressure
Intervention	Developing skills and making appropriate adaptations	• Appropriate school environment • Appropriate adaptations • Tutoring or doing academic work with someone • Study and other school-related skills including compensatory techniques • Life skills training
	Professional and medical interventions	• Professionals that listen and understand • Appropriate recommendations • Collaboration in managing medication regime
	Career guidance and exploration	• Career exploration experiences assist with career choice • Choosing subjects with career opportunities in mind

Table 4.9: Perspectives on interventions and support – categories, subcategories and codes (continued)

Category	Subcategory	Code
Promotion of self-determination	Increasing motivation	• Internal dialogue and taking responsibility • Material that interests • Withstanding peer pressure
	Building self-esteem	• Changing my perspective • Feeling able to achieve at something
	Maturity / developmental process	• Growing more mature • Life experience / exposure to life situations

Details will now be presented on the established categories, subcategories and codes related to participants' views on previous and current interventions that have been effective in assisting with occupational difficulties as well as sources of support.

I. Support and mentoring

Ia. Emotional support and social acceptance

Adolescent participants especially emphasised the value of emotional support and understanding. Participants stated that it helped them when they felt that they were **being heard** and that someone took the **time to understand**. They also stated that it meant a lot to them when **someone believed in them** and gave them **recognition as an individual**. Two of the participants explained as follows:

> *"When someone believes in you it's such a huge inspiration because if someone tells you can to do that that boosts you a lot." (A17)*

> *"Ja en ook wat half vir hom as 'n persoon ingestaan het... En hoe hulle hom hanteer het in die klas en wat ek nogal weet wat 'n invloed gehad het." (P10)*

("Yes and also that sort of stood up for him as person... And how they treated him in the class and what I know that has had an influence." (P10))

Experiencing **universality – having someone that is experiencing the same difficulties**, especially peers, was also deemed as helpful by the participants. For many of the adolescent participants from LSEN schools this kind of support came from being in smaller classes with other adolescents with the same types of disabilities as well as the fact that they had often been together from early primary school.

"Ek weet iets wat my help is in my vriende en so aan. Want ek weet nie, want baie van my vriende soos ek sukkel, dan weet ek ek doen dit nie alleen nie... En ons weet ons gaan saam met mekaar wees in die klas en saam baie naby geword en ken mekaar persoonlik... En dis net ek weet dit help met dit, dit help met dit, vreeslik baie." (A9)

("I know something that helps me is in my friends et cetera. Because I do not know, because many of my friends struggle like me, then I know I do not do it alone... And we know we will be together with each other in the class and together we grew close and know each other personally... And that is just I know it helps with it, it helps with it, very much." (A9))

The next concept involved having someone that could offer **advice and assistance with solving problems**. Parents, teachers, other adults and peers were all stated as possible people that could help with problem-solving. One participant stated:

"My ouers het my nog altyd gemotiveer... Hulle het my gemotiveer en hulle het my gehelp, hulle het my nie soos, hulle het my nie alleen gelos met die probleem nie, hulle was, hulle was saam in die ding. Hulle het 'n

groot rol gespeel want as ek enige tyd gesukkel het, hulle was bereid om my te help. Hulle het my baie gehelp... Dit is meer die motivering, sal ek sê, ja." (A9)

("My parents have always motivated me... They have motivated me and they have helped me, they have not like, they have not left me alone with my problem, they were, they were with me in the thing. They played a huge role because at any time I struggled, they were willing to help me. They helped me a lot... It is more the motivation, I would say, yes." (A9))

Parents also stated that having support and assistance in parenting and handling their children as well as experiencing universality amongst other parents with children with similar difficulties was a great help:

"(H)y (het) 'n musiek onderwyseres gehad en sy self het 'n kind gehad wat een of ander probleem het. Ek is nie... weet nie wat nie. En sy het baie vir my gesê moenie so maak nie, maak so. Doen dit nie en doen dit en dit het ons baie gehelp. En daai tyd toe ek hom uit die skool uitgehaal het ook, was sy een van my groot kampvegters. Sy het gesê doen net... doen net wat jy voel is reg, moenie 'worry' wat enige iemand anders sê nie. Doen wat jy voel is reg vir jou kind." (P10)

("(H)e (had) a music teacher and she herself had a child with one or other problem. I am not... do not know what. And she told me many times to not go about it like that, go about it like this. Do not do that and do this and that helped us a lot. And the time when I took him out of the school, she was one of my big supporters. She said just do... just do what you feel is right, do not worry what anybody else says. Do what you feel is right for your child." (P10))

An **integrated support system** between family, school personnel and other social support structures like an adolescent's religious organisation were said to be important to assist in identifying and assisting with adolescents' difficulties:

> *"Of net ondersteuning, maar ons moet ondersteuning nie net van... Miskien ondersteuning van die kerk ook, geestelik, ondersteuning van die onderwysers, ondersteuning van jou familie. Ek dink daai is drie sterk... wat jy kan terug val. Absoluut. Jy weet en as die skool sien iets is fout met die kind moet hulle die ouers laat weet, dat die kerk kan inkom en help." (P9a)*
>
> *("Or just support, but we must not just support from... Maybe support from the church too, spiritual, support given by the teachers, support given by your family. I thing these are three strong... on which you can rely. Absolutely. You know and if the school observes something is wrong with the child, they should inform the parents, that the church can come and provide help." (P9a))*

Finally, having the ability to **be socially well integrated** and thus experiencing acceptance was also stated to assist adolescents:

> *"Maar dit is wat ek sou sê, ek sou sê die fisiese feit dat hy goed aangepas het... en likeable is, mense hou van hom. Ek het nog nooit regtig iemand gekry wat nie van hom hou nie. Kinders en grootmense hou net van hom. Hoewel hy nie baie praat nie, hy is 'n baie stil kind, maar hulle hou van hom. So ek weet nie. Ek dink dit het gemaak dat dinge vir hom makliker was." (P10)*
>
> *("But this is what I would say, I would say the physical fact that he adapted well... and that he is likeable, people like him. I have not found*

anyone that does not like him. Children and adults just like him. Although he does not talk a lot, he is a very quiet child, but they like him. So I do not know. I think it led to things being easier for him." (P10))

Ib. Family situation and stability

A few participants mentioned their family situation and stability during the discussion. **Having a stable home environment** was regarded as important for stability especially due to adolescents' emotional instability. The availability of at least one stable and **supportive parent** was also stated to be important.

"My mother... I don't know I thinks it's mothers ... My mother she listens to my side of the story before she jumps down my throat. Because my parents are divorced and I stay with my mom she will take me to the gym. She always puts me before herself and I don't know is just how she is for me and my brothers." (A5)

One parent participant emphasised that parents need to be available for adolescents to talk to:

"Tieners voel nie hulle kan met hulle ouers praat nie. Dit is wat ek weer wil sê. In ons huis is dit anders want my kind kan een uur in die nag opstaan en ons sal praat tot drie uur oor 'stupid' goed, maar wat hom pla. En waar ander tieners nie die vrymoedigheid het nie, en so ek dink dit is goeters wat mense aan moet aan werk want ek dink dit is vir tieners belangrik." (P10)

("Teenagers do not feel they can speak to their parents. That is what I want to say again. In our house it is different because my child can get up at one o'clock in the night and we will talk to three o'clock about stupid

things, but that bothers him. And where other teenagers don't have the boldness, and so I think it is things that people should work at because I think that is what is important for teenagers." (P10))

Engagement in shared family activities was also mentioned as an important means to facilitating this connection. Other parent participants mentioned the importance of **managing sibling competition and comments** regarding the adolescent with a LD's weaknesses.

Ic. The right expectations

Having the right or realistic expectations – not too high or too low – of an adolescent was another aspect that was stated as helpful in helping them achieve. The comments made mainly pertained to educators. An **expectation to perform according to potential** was said to be important. One participant stated that having someone push him, knowing that he could do better motivated him:

"Meestal al die juffrouens want hulle druk my om te studeer... Hulle weet min of meer hoeveel ek kan kry. Hulle weet dis nie altyd my beste nie." (A8)

("Mostly all the teachers because they pressure me to study... They know more or less how much I can achieve. They know it is not always my best." (A8))

While others stated that **not putting too much pressure** on them was more helpful:

"The teachers that aren't having a fit if we're not starting to study yet. Mr. R he's not very worried and he says this other ones, the other

teachers, are not I don't want to be 'skindering' (gossiping) or rude but they really getting on our hind horses in a way... He doesn't put pressure on us he believes we are going to pass the subject good." (A17)

Some parents stated that they needed to adjust their expectations according to their child's abilities and to be supportive regarding the results that their child's best efforts deliver.

II. Intervention

IIa. Developing skills and appropriate adaptations

An **appropriate school environment** with experienced teachers and small enough classes was stated to be instrumental in academic success.

"Wel, my skool maak dit makliker... Want ons is baie minder in 'n klas, so dit... as jy is, die juffrouens is meer ge... meer tyd om te luister vir jou soos in 'n skool van soos ek was in [school's name] op 'n stadium, dan het soos twintig kinders hulle hande op en dan kom hulle nie altyd by jou uit nie en die minder help... En die juffrouens kan ook meer kyk waar jy sukkel en soms kom jy nie eers self agter waar jy sukkel nie. Die juffrouens kom dit vinniger agter by die skool... (En) ek skryf nie my toetse nie, ek kry ander mense, ek het nog net altyd, ek kry nou net lees hulp. Dit is... maak dit makliker." (A9)

("Well, my school makes it easier... Because we are much fewer in a class, so it... if you are, the teachers are more... has more time to listen to you compared to a school [school's name] where I was at a stage, then about twenty children has their hands up and then they do not always get to you and the less help... and the teachers can also see better where you struggle and sometimes you do not even realise yourself where you

struggle. The teachers identifies it quicker at school... (And) I do not write my tests, I get other people, I always just have, I now only get reading help. It is... makes it easier." (A9))

A parent participant in agreement with this stated:

"En weet jy in (A10) se geval spesifiek, spesifieke onderwysers wat verstaan, het nogal al baie bygedra, baie. Wat die hele situasie en hoe... ek dink dit is hoekom hy nooit regtig 'n probleem in die skool gehad het en almal sien hom nie as 'n probleem nie want die onderwysers het regtig verstaan en hulle het uitsonderings vir hom gemaak." (P10)

("And do you know in (A10)'s case specifically, specific teachers that understands, has contributed rather a lot, a lot. About the whole situation and how... I think it is why he never really had a problem at school and everyone does not see him as a problem because teachers really understood and they made exceptions for him." (P10))

Specific adaptations like test and exam writing concessions as well as using technological adaptations like typing or audio recording of content were stated to make important contributions to academic success.

"As hy moet leer uit 'n boek uit, [school's name] het hierdie, laat hulle die Juffrou lees dit op 'n CD, dan luister hy die CD... fantasties." (P9b)

("If he has to learn from a book, [school's name] had this, they had the teacher read it on a CD, then he listens to the CD... fantastic." (P9b))

Tutoring and doing academic work with someone was also stated as a big support for engaging in academic tasks. It was often a parent, especially a mother that assisted with projects and studying, but some also mentioned peers, family members and other adults that provide the needed assistance. Two participants explained:

> *"My ma. Sy sit saam met my twaalf uur in die aande sodat ek kan leer ensovoorts. Sy sit saam met my help my met hierdie 'speeches' en so alles. Sy help my met alles amper." (A10)*
>
> *("My mother. She sits with me twelve o'clock at night so that I can learn et cetera. She sits with me helping me with these speeches and all. She helps me with almost everything." (A10))*
>
> *"Party keer help ons mekaar as ons nie die werk verstaan nie... Ja, dis as iemand dit verstaan en die ander persoon... dan help ons mekaar so." (A8)*
>
> *("Sometimes we help each other when we do not understand the work... Yes, that is when someone understands it and the other person... then we help each other like that." (A8))*

Having been taught **study – and other school-related skills** to cope with school tasks were also said to have been helpful as well as general **life skills training.** Strategies like planning ahead, starting to study long before a test and breaking content down into smaller chunks at a time were stated to be useful. Learning general stress and anxiety management, time management and organisation skills were also stated to assist.

> *"I think just the input from the remedial teacher who is working on him, to get his time organised, and also just there was a maths teacher, that he had this year, but she was very good at just getting hold of him and his*

books and saying come let's get organised. And it is that little input that spurs him on." (P16)

IIb. Professional and medical interventions

Participants stated that it helped when educational and medical **professionals** that they consulted **listened and tried to understand**. An educational or medical professional making **appropriate recommendations** especially in relation to school placement were said to have made a big difference in their lives and ability to succeed. One participant stated:

"She was my psychologist – a lovely lady. She just got you. Like I was jumping from doctor to doctor, to psychologist, to psychiatrist and just everywhere, all at once, and when we finally got to her. I don't know, it just... the puzzle started fitting. I got the little frame going on, so I think she had a big impact in my life." (A3)

Other appropriately timed recommendations were also stated to be invaluable:

"(A)s dit nie vir daai arbeidsterapeut was nie, wat aanbevelings gemaak het nie weet ek nie waar ons sou gehelp word nie..." (P9a) "Want sy't gesê moet nie laat hy groep sport doen nie, laat hy 'n individuele sport doen." (P9b) "Jy weet iets waarin hy kan goed vaar, en ek dink dit het vir ons..." (P9a)

("(I)f it was not for that occupational therapist, who made recommendations I do not know where we would have gotten help..." (P9a) "Because she said do not let him do group sport, let him do an individual sport." (P9b) "You know something that he can excel in, and I think that has for us..." (P9a))

One aspect that was highlighted in terms of medical intervention was the need to **collaborate in managing a medication regime**. Not many adolescents or parents commented specifically on the helpfulness of medication, although almost half of the participants were taking medication for concentration. One participant who had previously taken medication for epilepsy had strong opinions about the process of collaboration in establishing and managing a medication regime. It was felt that being heard and involved in the planning of the medication regime and wanting to have some control and choice in the matter is very important. The following comment communicates this view:

> *"I never enjoyed taking medicine at all. It was terrible for me. I didn't enjoy it. I knew I had to. I had no choice... So taking medicine... Of course, medicine helps. Sometimes it doesn't. I think people just assume that it's going to work but I took myself off my medicine and, honestly, I think that was the best decision. I wanted so badly to be off. Every time, when I went to an appointment, I was, "So when am I going to stop taking this because, honestly, I don't want to take this anymore?" ... I kept on saying that to so many and then eventually I'm like, you know what, I'm just going to do it myself. Since then, touch wood, nothing... Again, I think, listening to little children, especially... Not like these little incy bincy things, but like important things and they're like 'listen'. I'm not someone else. I'm me and I do things differently. You need to adjust to each person differently and not judge everybody the same."(A3)*

IIc. Career guidance and exploration

Special mention was made regarding the usefulness of **career exploration experiences in assisting with a career choice**. One participant explained how observation of a career within a workplace assisted in the making of a career decision:

> *"(D)ie 'job shadowing' ding is jy moet uitvind wat jy wil doen. Ek het al gaan 'job shadow' by 'n paar werke en dit het my gehelp. Ek weet nou waarnatoe ek wil gaan en waarnatoe ek werk." (A9)*
>
> *"(T)he job shadowing thing is that you should find what you want to do. I went to job shadow at a few places of work and it helped me. I now know where I want to go and towards what I want to work." (A9)*

A parent participant commented on the importance of **choosing subjects with career opportunities in mind**:

> *"So dis nie laat hy maklike vakke het nie, hy't al sy moeilike vakke op die skool gevat. Want ek glo, weet jy wat met daai vakke kan hy iewers in die lewe kom... Ja, ek het baie spesifiek... en ek het met hom gesit en vir hom verduidelik as jy daai vak vat kan jy dit en dit en dit doen met daai vak." (P8)*
>
> *("So it is not that he has easy subjects, he has all the difficult subjects at school. Because I believe, you know that with those subjects he can get somewhere in life... Yes, I have very specifically... and I sat with him and explained to him if you do that subject you can do this and this with that subject." (P8))*

III. Promotion of self-determination

The last category of interventions and support focused on the adolescents' self-esteem and self-determination.

IIIa. Increasing motivation

It was stated that self-motivation is very helpful for adolescents with LDs. Increasing self-directing **internal dialogue** and their **taking responsibility** for their school work was mentioned as important. Telling themselves to focus was one important strategy to facilitate concentration especially during academic activities. Another factor included using **material that interests** the adolescent to enhance motivation and engagement in difficult tasks like reading:

> *"En hy't daai boeke gelees omdat hy belang gestel het in die storie, het hy dit gelees. Maar dit vat hom lank om te lees, maar hy't belanggestel in daai storie." (P9b)*
>
> *("And he read those books because he was interested in the story, he read it. But it takes him long to read, but he was interested in that story." (P9b))*

Parents especially also commented on the importance of being able to **withstand peer pressure** as a helpful aspect of self-determination to avoid especially engagement in risk behaviour.

IIIb. Building self-esteem

Achieving in some activity whether it be one subject at school, sport or other non-educational activities were another important factor that participants mentioned as helpful in promoting adolescents with LDs' self-esteem. It was said to **change their perspective** on themselves and about their ability to succeed and made them **feel like they were able to achieve at something**. One participant explained as follow:

> *"Die 'playing sports' het my baie gehelp, dit motiveer my en als. Ek geniet dit baie. Dis net lekker. Dit het nou op 'n manier gehelp om my werk te verbeter juis omdat ek het gevoel ek kan in iets ook presteer." (A9)*
>
> *("The 'playing sports' helped me a lot, it motivated me and all. I enjoy it a lot. It is just enjoyable. It has now helped me in a way to improve my work just because I felt I can also excel in something." (A9))*

IIIc. Increased maturity

Growing more mature was mentioned by adolescent and parent participants to assist with the improvement of skills like reading, but also with their approach and handling of school-related pressures and their difficulties. It was stated that they often seem to take longer than their peers to reach various levels of maturity, but that improvement was often seen with increased maturity.

> *"Ek dink dis dalk net 'n ontwikkelingsproses want dit vat hulle 'n bietjie langer om uit te kom by die lees of by die wiskunde ... Ek dink dis maar net tyd want vat maar net langer." (P1)*
>
> *("I think it is probably just a developmental process because it takes them a little longer to get to reading or mathematics ... I think it is just time because it just takes longer." (P1))*

Some parents also stated that **exposure to real life situations** and increased **life experience** assisted adolescents in making better choices and being more goal-focused.

4.4 Summary

In summary, this chapter presented the demographic information of the study participants. Eighteen adolescents, between the ages of thirteen and nineteen years old, and nine parents from mainly LSEN schools participated in the study. Diagnoses ranged between ADHD, SLD and those that had not been formally diagnosed but were attending a LSEN school.

Three themes emerged from the qualitative inductive content analysis of the adolescent and parent focus groups and interviews. These entailed the current and future OPPs for adolescents, current occupational difficulties and perspectives on interventions and support.

The first theme regarding OPPs entailed aspects relating to the adolescent perspective and developmental needs, occupational needs as well as priorities in preparing for the future. Card sort results relating to this theme included priorities in terms of education and preparation for the work place, social integration and leisure activities like sport as well as physical and psychological health maintenance activities.

Theme two included categories of difficulties relating to developmental difficulties, occupational difficulties and intervention-related difficulties. The main activities chosen as difficulties in the card sort activity related to productivity, especially education-related activities, organisation and time management skills as well as some socialisation and IADL difficulties.

The last theme consisted of perspectives on interventions and support relating to support and mentoring, specific interventions and the promotion of the self-determination of adolescents. The main sources of support that were mentioned included an appropriate

school environment, teachers, parents, especially mothers, friends, other involved adults and educational or medical professionals like psychologists and occupational therapists.

CHAPTER 5 DISCUSSION

5.1 Introduction

This chapter will present a discussion of the results of the study. Aspects related to the demographic information of the participants will first be discussed followed by a discussion in relation to the objectives of the study. The objectives of the study included exploring firstly the perceptions of adolescents with LDs and their parents about their current and future priorities for their participation in different areas of occupational performance (OPPs), noting the differences and similarities. Secondly, describing the perceptions of adolescents with LDs and their parents regarding the adolescents' difficulties with current occupations and thirdly the supports and interventions that have been effective in helping to improve occupational performance thus far.

5.2 Demographics

All participants met the inclusion criteria as they were adolescents diagnosed with a LD or attended a special school for LDs or they were the parents of these adolescents. This resulted in a homogenous group based on the inclusion criteria. The greater amount of male adolescent participants reflects statistics in literature reporting a greater incidence of LD in males[186, 187]. The views of fathers were not well represented amongst the parent participants, however the fathers were less available to be interviewed and less involved in the adolescents' school work than the mothers. This was also reported in a study by Rogers *et al.*[188] regarding parental involvement in children with ADHD's learning. The variability of ages, current grade placement, gender, schooling as well as previous and current interventions resulted in a diversity of views adding to greater transferability[179, 181]. However diversity of culture, language, socio-economic class and adolescents who had dropped out of school due to LD-related complications were poorly represented, which may negatively affect the transferability of the results.

5.3 Adolescents with learning difficulties and their parents' perceptions about their current and future occupational priorities

The adolescents' often unrealistic expectations of the future as well as the important influence that parents have on adolescents' goals and activity choices[189-193], necessitated including the parents' perspectives in the study and provided valuable insights. Having stated the adolescents' proneness to unrealistic expectations or idealism[22], it was interesting that generally parents' and adolescents' identified OPPs related well with one another noting only a few differences, including the categorisation of activities into productivity, pleasure and restoration. During the discussion mention will only be made of specific differences between the parent and adolescent participants while the other results will be presented as the perceptions of both groups.

The activities identified from literature included in the card sort and brainstorming activity were performed as a warm-up during the interviews and focus groups in the study. These activities corresponded well to the activities or daily tasks reportedly performed or anticipated to be performed by the adolescent participants. Only a few extra activities were added by participants such as spending time in nature, "job shadowing", starting and running your own business, helping others and meeting new people. The use of the occupational categories of productivity, pleasure and restoration[12] posed some overall challenges however. On a few occasions participants commented on the confluence of the categories, which was the intention of the inclusive or overlapping categories set out by Pierce[12] in the Occupation by Design Model. Thus some activities featured in more than one category related to participants' subjective experiences of different activities. This was incorporated into the inductive content analysis which consequently assisted in grouping important expressed needs in regard to the less prioritised activities.

Three categories of needs or priorities emerged from the thematic analysis of the participants' views of current OPPs. Firstly, participants highlighted factors and needs

related to the developmental phase (i.e. adolescence) that influenced both their occupational performance and their views on important occupations. The second category related to mainly their current occupational needs and occupational performance regarding the three subjectively experienced occupational categories of productivity, pleasure and restoration as well as the balance amongst these categories. Lastly the participants emphasised the need to prepare for their future occupational performance, which included emerging and changing roles as well as developing independence. Each category of needs or priorities is briefly discussed.

5.3.1 The adolescent perspective and developmental needs

The adolescent perspective and developmental needs related to these adolescents' world view and perspective namely feeling invincible and experiencing a tension between being focused on preparing for the future vs. enjoying their current activities. This seems to stem from their life phase and aspects of adolescent cognitive and psychosocial development as well as the increased immaturity that is often a feature of LDs. On a cognitive level, executive functions and planning abilities are key functions still developing during this phase[62, 66, 69] and are usually areas of difficulty related to LDs[3, 4]. In the opinion of the investigator these adolescents seem to be experiencing inner conflict due to desiring the independence of adult roles while wanting to enjoy the comfort and non-responsibility of child roles. The investigator furthermore was of the opinion that lack of lived experience, especially due to only starting out new roles like the worker role and role of a romantic partner, and uncertainty regarding the future also appears to be other factors contributing to these mindsets. In the view of the investigator, information from the media and significant adults in their lives most probably made them aware of possible challenges that adults face. These challenges include poor economic circumstances, high unemployment and divorce rates, and may even be more prevalent due to the adverse effects of having a LD. This may in turn have added to the adolescents' anxiety resulting in a response through

denial (thus rather focusing on enjoying the present) or wanting to be prepared (thus focusing on the future).

Parental views and values may also have influenced adolescents' perspectives and their development of future orientation. Some parents might model, teach and emphasise planning and preparing for the future while others may live in a day-to-day fashion emphasising the importance of living in the moment[194-198]. The presence of a LD, especially ADHD, may have further contributed to feeling invincible and focusing on current needs due to poor impulse control, proneness to risk-taking behaviour and difficulties with planning[8, 133] although it is difficult to estimate these functions' influence in this population of adolescents as these are not necessarily evident during focus groups as such and require further assessment and research methods.

The next developmental need strongly emphasised by participants, was to be socially connected with various groups of people including family, friends, romantic interests, the community, new people and even animals was strongly emphasised by participants. Being socially connected was anticipated to be important to both parents and adolescents and coincided well with adolescence being hypothesised as a sensitive period for increased social development[62]. It was interesting that the participants did not seem to value family relationships less even though peer relationships were growing in importance during this time. This is in keeping with McNeely and Blanchard's[92] statement that while adolescents spend increasingly more time with peers it does not equate to a diminished value of family relationships. Most participants stated that spending time with their families was important to them, while also emphasising that friends were crucial for emotional support and for sharing enjoyable activities.

Two aspects in terms of adolescent development that differed from adolescent literature for these participants were the lack of an expressed interest in romantic relationships by some of the participants and the reported importance of technology in social interactions. The literature on adolescents' sexual behaviour widely reported the occurrence of casual unsafe sex and sexual promiscuity and other risk behaviours that are currently a real health concern in attempting to prevent the spread of HIV and other STDs[119, 199]. However, in the opinion of the investigator a lower interest in romantic relationships expressed by some participants in this study could be attributed to a number of factors . These include emotional immaturity associated with LDs (especially the younger participants), adolescents with LDs being more sheltered by parents and wanting to avoid risk behaviours as well as giving precedence to other needs like freedom and independence (in the process of identity formation) over seeking a romantic partner. It is possible that participants' possible lack of social skills as well as their religious and cultural backgrounds may also have influenced their view. In the opinion of the investigator, it might also be that their true perceptions about romantic relationships were not expressed. This finding may also be linked to them regarding sexual activity as a sensitive, even taboo, topic. A different approach to interviewing, over a longer period of time to establish a better rapport, or possibly in an environment guaranteed to be free from interruptions or the potential of being overheard, may be needed for participants to express their real views.

The use of technology was also not emphasised with the importance related to social interactions initially anticipated by the investigator in view of that reported in literature[90, 200]. In the opinion of the investigator, it might be due to technology being viewed by this group of participants as just one of the avenues for connecting with friends and peers and thus the emphasis was on the interaction with the friends rather than the interaction with technology. Other aspects that might influence adolescents with LDs' use of social media may include difficulties with spelling, reading and vocabulary, thus making the use of text-based messaging more challenging and effortful than for other adolescents. This may

include an aspect of embarrassment due to their difficulties. On the other hand predictive text and spell checkers may play an enabling role for communication via these platforms. Not having enough funds available to purchase data for interacting on social networks may be another factor to consider especially amongst some of the adolescents of lower socio-economic status.

Based on the perspectives of the adolescents discussed above their occupation needs from their perspective and those of their parents were considered.

5.3.2 Occupational needs

The main productivity need stated as a priority by all participants was completing their high school education and being involved in the activities supporting this goal. Education was most probably valued by participants as it was viewed as an avenue to qualify for access to post-secondary education opportunities in favour of obtaining better employment in future. Other South African-based studies pertaining to adolescents report similar needs[201-203].

Engaging in part-time employment was a need for some of the adolescent participants and was also mentioned as important by some of the parents. Similar to other literature on adolescent employment[204, 205], part-time employment was seen in a positive light by participants with the benefits of being meaningfully occupied, increasing in independence and as a means of career exploration and the development of work skills. However, none of the participants voiced any of the negatives associated with adolescents' engagement in part-time employment reported in the literature. These include poor academic performance and school attendance, increased alcohol and substance abuse and as well as deterioration in relationships with parents[204, 206-211]. Factors such as the quality of the work performed and the amount of hours spent working were reported to be determinants in whether part-time work is beneficial or detrimental to adolescents[204, 206]. Consequently the OPP of part-

time work needs to be well managed to have a beneficial outcome for adolescents, particularly for adolescents with LDs if there are to be no negative consequences. It appears that with the participants of this study part-time work was a positive experience most probably due to their parents playing a regulatory role in helping them maintain a balance between time spent in education tasks vs. time spent at work. The type of work they reported to be engaged in also seemed to be good quality work that contributed to the development of skills and exposure to environments preparing them for a future career.

The leisure activities chosen as priorities by both adolescent and parent participants coincided well with those reported in the literature, including socialising, passive leisure time activities such as listening to music as well as more active and structured activities like playing sport or attending a party[18, 20, 72, 95, 212-214]. Pleasurable or enjoyable activities, which consisted mainly of leisure activities, were especially important to the participants of this study. They reported these activities allowed them to experience a sense of accomplishment contributing to self-esteem needs, which they did not achieve in productive activities due to the negative influence of their LD on productive activities. Studies regarding optimal experience or flow amongst adolescents supported this notion[215, 216]. Kleiber *et al.*[215] reported that adolescents experienced flow, including positive affect, freedom and intrinsic motivation in leisure activities rather than productive or restorative activities. In contrast with passive leisure activities, active or structured leisure activities also provided the opportunity for challenge and concentration that is necessary for flow and thus contributed more to adolescents' well-being.

Other occupational needs addressed by participants included the importance of activities that restore and provide energy, activities that maintain physical health and psychologically restorative activities. This included sleep, healthy eating and physical activity as well as other restful activities which incorporate time for reflection and self-expression. Nutrition and exercise as contributors to adequate energy levels were highlighted by the participants. The perceived importance of maintaining physical and psychological health, is supported by

other studies on adolescent health behaviour[217-219]. Healthy eating, physical activity and sleep patterns not only influence energy levels and a feeling of wellness but are also reported to benefit adolescents, including increasing cognitive and physical performance as well as having a variety of psychological and social advantages. These factors are reported to be interlinked and each influences the quality of the others[219-221]. These may be even more important for adolescents with LDs to maximise their cognitive, psychological and social abilities due to already experiencing challenges in these areas. Participants stated a priority and need for psychologically restoring activities. This could be attributed to their reported fluctuations in mood, common in adolescence and the psychological process of adapting to the changes brought about by puberty as reported in literature[20, 22, 55, 56, 59]. It may be an even greater need for these participants due to increased anxiety levels associated with ADHD and LDs resulting from social and academic difficulties.

The participants' stated needs in managing a balanced occupational pattern resonates well with adolescent development and occupational patterns in terms of their increasing independence and greater demands to organise their own schedules with less adult supervision and regulation as described by Kielhofner[19] and Shepherd[45]. The choice of activities in establishing a balance between high energy productive or pleasure activities and energy-restoring restorative activities, is not only important for both quality of life and life satisfaction but also to manage stress levels and the need for adequate stimulation. Kielhofner[19] stated that this freedom to choose occupations assists adolescents with the process of value clarification.

The need for a balance of productivity, restoration and leisure activities and the type of activities in which the adolescents engaged in are important for setting up their future occupational performance. Adolescence is a time of transition and preparation for adulthood as maintained by a variety of literature[22, 55]. Participants indicated the need to

prepare for the future and for the expectations of adulthood in all occupational areas including productive, pleasure, restoration, independence and social areas.

5.3.3 Preparing for the future

The participants all identified the career decision-making process during adolescence was one of the most important developmental tasks in preparation for the worker role. Literature indicates that this process is influenced by both personal factors and contextual factors[18, 19]. In the South African context with high unemployment rates and inequalities, participants felt that there was more pressure on adolescents to choose careers and to develop skills that will provide them with employment opportunities[19, 112, 113]. The option of professionalising leisure activities such as sport, reported by some of the participants added another option for employment although there is no indication in literature whether this translates into successful employment for adolescents with LDs.

Considering entrepreneurship opportunities was also mentioned by participants and developing the set of skills needed to open and manage a business may be another avenue for adolescents with LDs to earn an income in future. Isaacs *et al.*[222] are of the opinion that entrepreneurship education is essential at school level if these skills are to be developed but the current school curriculum in South Africa only covers a small aspect of this in compulsory subjects such as Life Orientation. Other subjects that are focused on developing entrepreneurial skills may not be available to adolescents with LDs, especially those attending special schools where subject choices are limited.

Learning skills for independence were mentioned by the participants as important for establishing themselves as independent adults that are able to function without dependence on their parents and other family members. This includes moving out of their parents' home and establishing a home of their own. There are indications in more recent times that this

process is however delayed due to the high cost of living and extended post-secondary training often undertaken to improve chances of better employment[22, 223]. Skills to run a household were also seen as a key aspect of meeting restoration needs in terms of maintaining their physical health. This was related to keeping conditions within their homes hygienic, planning, shopping for and preparing healthy meals, as well as maintenance of appliances and the home. These activities form an important basis to support productive activities like studying or working. Getting to work or class on time, having the finances to pay for transport, buying clothing and food and other necessities as well as the self-care and personal presentation skills needed for work, class and social environments, were all mentioned.

Participants anticipated changes in leisure participation upon entering adulthood. A variety of possible factors that may impact on this change including the context in which leisure activities occur, as this may play a significant role in the possibility of continuation of these activities into adulthood[224]. School-based sport and cultural activities will no longer be available or will have to be pursued elsewhere, requiring more initiative and motivation from a young adult. Other factors that may contribute to changes in leisure participation and choice include the time available, parental values, health, income and individual goals and motivation. Scott and Willits[224 , 225] report that often adolescent leisure participation influences adult leisure participation, indicating the importance of developing constructive and meaningful leisure programmes with adolescents with LDs during their school years..

Preparing for and maintaining relationships in future as indicated by the participants in the study are a valid part of successfully transitioning to adulthood. It may also be crucial to adolescents with LDs due to possibly needing greater assistance and support in order to become independent and to establish a career. Larson *et al.*[226] state that in future adolescents will need to be ready for the greater flexibility required by relationships and the more varied social environments, e.g. the workplace or greater community contexts in which

they will be expected to interact. Adolescent participants in the study seemed to regard their romantic relationships much more seriously and with greater commitment in relation to the future than the parent participants. Adolescents for instance rather chose the activity "getting married / spending time with a spouse" while parent participants chose "dating" as future priority activities. Increased immaturity amongst adolescents with LDs may have contributed to this. These different views may also relate well to Collins'[227] statement that adolescent romantic relationships have previously been regarded as "trivial and transitionary" by the adults in their lives while these relationships do however contribute to the quality and commitment of romantic relationships in young adulthood[227].

Understanding adolescents with LDs' and their parents' priorities in terms of their occupational performance was the first step in to aid in the planning of better occupational therapy interventions. The next area to be discussed entails their perceptions regarding their current occupational challenges.

5.4 The perceptions of adolescents with learning difficulties and their parents regarding the adolescents' difficulties with current occupations

A variety of challenges were reported by the participants during the interviews and focus groups that affect their occupational performance and their negotiation of developmental tasks related to adolescence. Intervention-related difficulties were also reported.

5.4.1 Developmental difficulties

Making a career decision was one of the difficulties noted by especially the older adolescent participants. Anticipating which career would bring them satisfaction as well as weighing up the different options for possible further training were reported to be difficult by the participants. Increased immaturity and lower self-awareness as well as decision making

difficulties due to underdeveloped executive functions may be contributing to this. The adolescents also reported that the pressure to make the decision added to the difficulty, most probably due to the increased anxiety as well as the uncertainty regarding their future after finishing school that it brought about. Studies on adolescents and young adults with LDs (both ADHD and SLDs) also report difficulties with the decision making process of choosing a career[228-230]. Lower self-esteem due to academic difficulties may play a significant role in lowered aspirations, while adolescents with ADHD on the other hand may overestimate their abilities when making a career choice. One positive aspect for young adults with ADHD was that they were more often reported to be interested in entrepreneurship due to their increased risk-taking ability and they seemed to suit the working environment related to pursuing such ventures better than adolescents without ADHD[231]. This leads one to conclude that adolescents with LDs will need specialised and greater assistance in making an appropriate career choice that will suit their needs.

Difficulties with managing money and a budget as reported by some of the participants were supported by other studies especially for adolescents and young adults with ADHD. Impulsive spending and difficulties to save up were some related difficulties[8, 232]. Consequently adolescents with LDs need more monitoring and assistance in developing money management and budgeting skills.

A variety of social difficulties are reported in literature[8, 133, 233] that coincides well with the difficulties, like conflicted family relationships, difficulties amongst peers and teacher interactions, reported by the participants in this study. Although not all participants reported difficulties in this area, Glass *et al.*[234] reported that adolescents with ADHD have greater difficulties with interactions in their bigger peer group than with individual friendships while other studies report that they also have fewer close friendships[52, 235, 236].

Greater difficulties with family relationships possibly relate to needing more monitoring from their parents to get a variety of tasks done due to inattention and poor planning and organisation skills. Some of the parents in the study reported needing to spend significant amounts of time assisting adolescents with education tasks such as preparing for tests and examinations as well as practicing speeches and doing projects in order to maintain their grades at an acceptable level. The adolescent's struggles with memorising content and concerns about passing tests and examinations were reported to place a lot of strain on the parent-adolescent relationship. Parent participants reported having to facilitate understanding for LDs amongst siblings in order to mediate and prevent negative comments towards the adolescent with a LD that might negatively affect their self-esteem. Monitoring competition between siblings was also reported to be important to encourage a healthy self-esteem and emotional support within the home.

The parents also expressed their concerns regarding the social pressures that adolescents face at school and via the media as well as the adolescents' exposure to potentially dangerous activities. Considering that adolescents with LDs are more emotionally immature, have poorer judgement and may be more susceptible to peer pressure and various media influences[237], makes this a very valid concern from the parents perspective. However, there are a variety of factors that influence the action that adolescents take in relation to being exposed to social issues and engagement in risk behaviour. Parental involvement and family environment have been implicated as key determining factors in adolescents' decision making regarding engagement in risk behaviours[238-240]. Therefore, support for the parents and added input from a therapy and school level may be influential in assisting in influencing adolescents' actions in this regard.

Difficulties with relationships and interactions with teachers and other school staff were another area of social difficulties reported by the participants. Due to the big effect of LDs on school participation and achievement, this was not unexpected and these difficulties

were often reported in other studies[133, 233, 241]. Teachers do not always understand the impact and nature of LDs and its effects on academic achievement and classroom behaviour. One of the sources of conflict may be due to adolescents' poor planning and organisation necessitating teachers to threaten and coax them in order to hand in projects and assignments on time in order to receive marks. Teachers often attributed these problems resulting from adolescents with LDs' poor planning and organisation skills as the adolescents being lazy and to a lack of motivation, which in part may also be true. Thus facilitating a greater awareness of LDs amongst the teachers of adolescents with LDs may contribute to creating an educational environment that may be more conducive to aiding them in successfully engaging in educational occupations. Next the challenges relating to the occupational categories of productivity, pleasure and restoration wil be discussed.

5.4.2 Occupational difficulties

Difficulties in the productive area of occupation

A variety of emotional, cognitive and skills factors were reported by the participants as problems contributing to productivity difficulties which is one of the main areas of deficits for adolescents with LDs[7, 8, 133, 233, 241]. Low motivation and interest may be due to the increased effort needed for school tasks and lack of experience of success in these tasks[242]. Another factor may be learners', especially those with ADHD, learning styles and greater need for stimulation and novelty to achieve optimal arousal levels in school environments. Keeping their interest in school tasks to keep them engaged with curriculum content requires extra input.

Other client factor and performance skill deficits reported by the participants were in line with those reported to be key features of ADHD and SLDs and included cognitive, process and language skills[7, 8, 133]. These difficulties most probably contribute to the inadequate mastering of basic literacy skills like reading, writing, spelling and mathematics that are also

key to a SLD and often also present in adolescents with ADHD[7, 8, 133]. For instance the participants reported difficulties with reading and understanding study material especially in the language subjects, which could be linked to poor working memory. Working memory in turn, is part of the pattern of executive dysfunction related to both ADHD and SLDs. Poor planning and organisation also stems from this pattern of dysfunction. In Wiener and Daniels'[241] study the adolescents reported similar difficulties with planning and organisation relating both to time management and spatial organisation. Both Wiener and Daniels'[241] and this study's adolescent participants reported that this meant that they often procrastinated when having to start or complete large tasks.

The parent participants in this study reported that not being able to utilise technological adaptations within the school environment such as typing instead of writing an essay, was a significant contextual barrier. Despite inclusion policies and legislation that support the implementation of adaptive technology within school environments[13], the reality seems to be that the South African education system is still struggling to implement the necessary supports for learners with specific learning needs. A study by Venter[243] identified a number of barriers in relation to implementing adaptive measures within schools including teachers' large workloads, inadequate knowledge and awareness regarding adaptive measures and inclusion as well as inadequate support and resources, large classes, time constraints, peers' attitudes and corresponding behavioural problems.

The last aspect of the productivity difficulties mentioned by participants was difficulties with obtaining part-time employment upon disclosing their disability. These difficulties are also reported in literature by Nel[112]. Despite the Employment Equity Act[111] supporting the employment of people with disabilities, employers are reluctant to employ people with disabilities possibly[112, 113] due to lack of knowledge and inadequate support to implement reasonable accommodations.

Difficulties in the pleasure area of occupation

Some parents felt that their adolescents spent too much time in passive leisure activities like playing games and watching TV. The greater shift to passive leisure time activities may be related to lower energy levels reported in adolescence compared to childhood[20, 59]. These patterns of leisure participation were also reported in literature for both adolescents with LDs and without LDs[20, 213, 214, 233]. Reconsidering the monitoring and expansion of adolescents' activity choices regarding leisure activities and free time use may be important to assist them in maximising the developmental and possible diagnosis-related benefits that more structured and active leisure time activities have to offer for adolescents with LDs[46, 244].

Difficulties in the restoration area of occupation

Sleep difficulties were not reported as often as might be expected when taking into consideration the adolescent sleep phase delay and the influence of LDs and related medication on sleep patterns and sleep quality[8, 60, 245, 246]. Only a few adolescent participants reported having difficulties with falling asleep. This was different from the adolescents in Brook and Boaz's[233] study where more than half of the participants reported excessive day time sleepiness and an increased need for sleep. However, quite a few of their participants reported previous or current substance abuse[233] which can influence patterns and quality of sleep[245].

Some of the parent participants reported observing heightened arousal levels or difficulties with relaxing amongst their adolescent children, sometimes in relation to increased anxiety levels which are often comorbid to LDs[247, 248]. Some of the adolescent participants also reported difficulties with managing stress and anxiety levels, both during school-related tasks like writing tests and exams and during social leisure activities like attending a party. Wiener and Daniel's[241] adolescent participants agreed, stating that they often felt stressed when attending classes, feeling overwhelmed in the situation. Anxiety in many of these

situations may be caused by the adolescent's awareness of their inadequate abilities or lacking skills e.g. awareness of poor concentration and memory, reading and computational abilities, slow work speed, social skills, etc. Sensory modulation difficulties may also play a role in increased anxiety levels especially in busy environments like classrooms and social events. Thus teaching anxiety and stress management strategies, including sensory modulation strategies, may be very beneficial for adolescents with LDs.

Maintaining a balance of occupations

Participants reported struggling to manage and organise their occupations into a satisfying and balanced occupational pattern. Their increased difficulties with school tasks and slow work speed mean that school tasks like doing projects, homework and studying for tests and examinations take longer. Participants had two ways of handling this: either not engaging in the tasks e.g. not doing homework or not studying or on the other hand starting these tasks long before their peers in order to finish in time. In the latter situation their participation in the tasks were usually initiated and managed by their parents. Other studies also reported that school tasks took extended periods of time, resulting in adolescents disengaging from the tasks[233, 241]. Their time management and management of the work load with realistic time frames for academic work is an essential element which needs to be monitored and addressed in adolescents with LDs.

There are very few guidelines for occupational therapists dealing with adolescents with LDs and participants reported a number of difficulties in relation to therapy and other interventions they received.

5.4.3 Intervention-related difficulties

The first intervention-related difficulties reported by participants were related to taking medication for concentration difficulties. A negative influence on appetite and eating patterns are one of the common side effects reported in literature that was also reported by some of the participants[133, 172]. Inadequate or poor nutrition in turn may also affect learning and behaviour in ADHD[249, 250].

Some parents did not like the side effects of the medication on the adolescents' socialisation and personality. The reported effects on their child's social interactions and personality also contributed to a decision in some cases to no longer use the medication as it was felt that medication essentially negatively affected who their child was, despite the positive effects of the medication on decreasing problem behaviour and improving task-focused behaviour[133, 233]. Parents in a study by Hansen and Hansen[251] reported the same perceptions describing the process as "a balancing act" between functional gains and the side effects of the medication that includes the toning down of a child's personality.

Parents also reported that extra lessons and various interventions had taken up a lot of extra time when their children were younger and that extra lessons and interventions impacted on their occupational balance. At some stage many of them had decided to stop all interventions due to feeling that it was loading their child's schedule too much without bringing about enough improvement to warrant the time and money spent on these interventions. The increased time and financial demands of various interventions are also reported in literature[233, 237]. Some parents reported that seeing no improvement from an intervention may also result in experiencing it as a personal failure to achieve desired results with a consequent negative impact on the self-esteem of adolescents with LDs. Parent participants voiced concerns regarding the influence of the variety of interventions on adolescents' self-esteem. These concerns were felt to be very valid, considering that

adolescents are also reported to suffer from a low self-esteem in other studies and that they reported "feeling different" from their peers[233, 252].

The parent participants in particular mentioned the difficult emotional process of having to come to terms with their child's weaknesses and disability in order to move forward and act upon recommendations by medical and educational professionals regarding intervention. This included choosing the right schooling options and environments for their child. These perceptions were not unexpected considering the lifelong implications for independence, socialisation and employment that are reported in literature for an individual with an LD[8, 52, 237].

Having explored their current occupational difficulties, it is important to be aware of adolescents with LDs and their parents' perceptions regarding interventions and support that are or were effective.

5.5 The perceptions of adolescents with learning difficulties and their parents regarding effective support and interventions

The last theme contains participants' perspectives on interventions and support that have been effective thus far in assisting with occupational performance challenges identified in the previous theme. Three categories of interventions and support were identified namely support and mentoring, intervention and promotion of self-determination.

5.5.1 Support and mentoring

Social interactions for adolescents with LDs seem to either be an area of increased difficulty and frustration or a great support and possibly a method for compensation for other areas of difficulty and may help them to overcome their other challenges.

The adolescents regarded emotional support from peers, family and teachers important toward overcoming their identified occupational challenges, especially in the area of education. The adolescents stated how much it meant to them when someone believed in them, recognised them as an individual apart from their diagnosis or problem and when they felt someone heard and understood them. This may be due to often being misunderstood and their behaviour being misinterpreted both in the school and home environments as also reported in the study by Brook and Boaz[233] resulting in large amounts of negative feedback and being labelled as unmotivated and lazy. Parent participants emphasised the importance of an integrated social support system for the adolescents including teachers, family and other community institutions working together to encourage and support adolescents with LDs.

Participants commented on the value of a stable and supportive home and family environment. This included supportive parents and managing competition and comments from siblings. It seemed that the mothers of the adolescents played an integral role in facilitating successful participation in activities and to keep adolescents motivated and engaged in education and other activities. Their active involvement and monitoring role often seemed to make the difference as to whether the adolescent was coping with occupational demands or not. Wiener and Daniels[241] and Brook and Boaz[252] also reported on the importance of parental and family support. Brook and Boaz[252] recommended interventions that support not only the adolescents but the whole family, especially the parents who often received criticism due to people attributing adolescents' behaviour to poor parenting and inadequate discipline at home.

Some adolescents felt that especially teachers' expectations were important in either expecting too much or too little of them and this had an influence on their performance of education tasks. Expecting too much may relate to not understanding their conditions while expecting too little may be due to previous experience of adolescents with LDs not being

able to meet expectations. Having realistic expectations of these adolescents seem to play a role in them achieving success as is also reported by Brook and Boaz[233] and Wiener and Daniels[241].

5.5.2 Intervention

Interventions which included occupational therapy such as group therapy and counselling interventions, that were presented and available within the school context seemed to achieve better adherence, were utilised more often and viewed in a more positive light by both adolescents and parents alike. These interventions often focused on functional areas like anxiety management and organisation skills relating to the adolescents' school tasks.

Other interventions that participants perceived as effective and helpful related to the development of appropriate skills, establishing appropriate environmental adaptations, specific medical and professional interventions as well as suitable career guidance taking into account the effects of ADHD and SLDs on work performance.

Participants felt that the right schooling environment as well as appropriate adaptations in the environment like having concessions contributed to their ability to achieve success in education tasks. Tutoring and structure provided by either their mother or another person was also reported to be useful, most probably due to their difficulties with organising their time and belongings. In terms of learning specific skills, improving study skills as well as learning compensatory methods of doing tasks were reported helpful along with some basic life skills such as anxiety and time management. These interventions were also reported by Brook and Boaz[233, 252] and Wiener and Daniels[241] as being perceived as useful by other adolescents with LDs and their parents.

Professional educational and medical interventions were mainly viewed as useful where the professionals involved were willing to listen and understand the participants' perspectives thus following a client-centred approach. Well-timed recommendations regarding more suitable environments like school placements and appropriate adaptations were also reported as invaluable by some of the participants. Participants expressed the need to collaborate with medical professionals on medication regimes, being given some control over managing the medications and dosages they were taking. This need was also supported by various other authors, many of which are promoting the support of adolescents' autonomy and them taking more responsibility for their medication regime in order to achieve better adherence and management of medications for LDs[8, 133, 233, 251, 253].

Career guidance and exploration was the last category of interventions that participants viewed as effective for adolescents with LDs. Assistance to explore their strengths and weaknesses especially in terms of their LDs and to foster realistic expectations of themselves and the work place were stated to be very important in preparing the adolescents for future careers. Career exploration opportunities were perceived to be instrumental by some of the participants in achieving this and is also supported by various authors [228-231, 254, 255].

5.5.3 Promotion of self-determination

The last category of support and interventions mentioned by participants was the promotion of self-determination amongst adolescents with LDs. This is most probably an important aspect for these adolescents due to often reporting low self-esteem relating to experiencing frequent failure as well as lower levels of motivation compared to adolescents without LDs. As they grow older and with their approaching independence from their parents and their imminent entering of the work place and tertiary education, they will have to increasingly manage vouching for themselves and manage their difficulties on their own. They will ultimately have to take responsibility for their own success and occupational performance.

By increasing self-determination by interventions that increase their motivation, build their self-esteem and increase their maturity, they will be enabled to take responsibility. Some specific interventions that were suggested included assisting and teaching goal-setting, encouraging and adapting educational material to suit their interests, finding pursuits or activities outside of education where they can achieve success and exposure to real life situations that will assist with improving their emotional maturity. Wiener and Daniels[241] also suggested some of these strategies to assist with self-determination.

5.6 Summary

This chapter undertook a discussion of the results of the study according to the three main aims of the study. Firstly the participants' perceptions of the current and future OPPs of adolescents with LDs were discussed. These included the adolescent perspective and developmental needs, their occupational needs in the occupational categories of productivity, pleasure, restoration and a balanced occupational pattern and finally their needs in terms of preparing for future roles and occupations. Secondly the participants' perspectives on the adolescents' current occupational challenges were discussed with reference to developmental difficulties, occupational difficulties and intervention-related difficulties. Thirdly the perspectives on interventions and supports that had been effective were discussed referring to aspects such as the importance of support and mentoring for them, their views on current education, medical and professional interventions and the value of promoting the adolescents' self-determination. Some clinical implications and recommendations for occupational therapists providing intervention to adolescents with LDs that arise from these results will be discussed in the next chapter.

5.7 Limitations of the study

Some limitations relating to the study that arose during the process of data collection may have influenced the results obtained. The process of obtaining consent from the

participants provided various challenges in recruiting the initially envisioned group of adolescents and parents. One of the features of adolescents with LDs is poor organisation skills, making the return of consent forms a big challenge. Even with added incentives and specific due dates for returning forms, it remained a challenge. It resulted in obtaining mainly consent from a specific profile of adolescents that did not necessarily represent the full spectrum of demographics of adolescents with LDs, and consequently parents, in terms of race, socio-economic status, age and gender as was originally envisioned.

Procedures for data collection needed to be adapted due to the poor return rate of consent forms, changing from a focus group only design to including individual interviews. Logistics around getting a group of parents together for a focus group also necessitated conducting individual interviews as the parents often lived far apart and were not able to all meet at a place and time that suited everyone.

Time and availability restrictions within the school environment were another aspect that were challenging with the adolescent groups that were conducted at the schools. It was difficult to find an allocated time that did not interfere with educational and other school activities. Time allocated was often short, making it difficult to facilitate more in-depth answers to adolescents' perspectives on some of the topics. Conducting the individual interviews outside of school hours and at a convenient place for the adolescents and parents proved to be much more effective in gaining in-depth and rich data through deeper level questioning as time was not as restricted.

In some instances the parents voiced greater concern regarding some aspects of the occupational challenges that the adolescents experienced, particularly the social difficulties. This may have been due to parents having more life experience than the adolescents thus causing them to view certain aspects as of greater importance due its possible influence on

the adolescent's future occupational performance. It may also be due to adolescents downplaying their weaknesses in an attempt to preserve their self-esteems.

The last limitation related to the group or interview often being the first personal contact with the participants which may have influenced their openness regarding sensitive topics and personal opinions. The use of the card sort activity as an introduction to the group or interview proved important in bridging this challenge.

CHAPTER 6 CONCLUSION

6.1 Summary of study purpose, design and findings

The purpose of this study was to describe the perceptions of adolescents with learning difficulties (LDs) and their parents on the adolescents' current and future occupational performance priorities (OPPs), their current occupational challenges as well as their views on support and interventions that have been effective in addressing occupational challenges. The study utilised a qualitative, exploratory, descriptive methodology and data collection was conducted via focus groups and individual interviews. Through inductive qualitative analysis, three central themes were identified from the data.

The first theme contained the participants' perspectives on their current and future OPPs. Participants indicated needs or priorities relating to the developmental stage of adolescence. This included their understanding of the adolescent perspective and world view, as well as the need to be socially connected to a variety of people in their lives i.e. peers, family and teachers. The participants' identified OPPs relating to their occupational priorities in the occupational categories of productivity, pleasure and restoration, along with their need for a balanced occupational pattern. Lastly, they expressed the need or priority to prepare for future occupations in the various occupational categories and in the social and independence areas of their lives.

Occupational challenges were identified as part of the second theme. These included developmental challenges relating to making decisions for the future, gaining skills for independent living as well as social difficulties. Occupational challenges mainly entailed productivity difficulties relating to education as well as some restoration difficulties and difficulties with organising and managing a balanced occupational pattern. Challenges related to the intervention they currently or previously received highlighted aspects such as the side effects of medications for LD-related symptoms and the psychological and specifically self-esteem consequences of a variety of interventions. The adverse effects of an overload of interventions also came to light.

Theme three contained the participants' perspectives on interventions and support available for LDs. Participants firstly stated the importance of support and mentoring from a variety of people in their lives including family, peers and teachers. Mention was also made of the value of a stable and supportive home environment along with appropriate expectations of success. Specific interventions that were perceived to be effective included improving skills deficits like study, life and compensatory skills, the optimal environment with appropriate adaptations, professional educational and medical interventions that are client-centred as well as appropriate career guidance and exploration. The promotion of self-determination in adolescents with LDs were also viewed as helpful including strategies to improve their motivation, build their self-esteem and develop their emotional maturity.

6.2 Conclusions

Occupational therapy services to adolescents with LDs are an area that is not well established, although this population does have occupational performance difficulties that fall within the scope of occupational therapy.

From this study's results, it can be concluded that adolescents with LDs and their parents have specific perceptions of the current and future occupations in each of the categories of productivity, pleasure and restoration that are priorities for them. These occupations are in line with normal adolescent development and need to be taken into account if occupational therapy services are to be client-centred and occupation-based. They are also different from the occupations of children and adults with LDs, warranting special consideration when planning services specifically for adolescents with LDs.

According to the perceptions communicated by the adolescents with LDs and their parents, the symptomatology of LDs including SLDs and ADHD, do continue to cause occupational performance challenges into adolescence and in relation to adolescent-specific occupations.

Consequently they do warrant occupation-based occupational therapy intervention and fall within the scope of occupational therapists to address. Effective occupational therapy intervention should address these occupational challenges and include them in collaborative occupational goals to implement client-centred and occupation-based intervention. These goal-setting practices need to be combined with appropriate occupation-based outcome measures to provide evidence that occupational therapy interventions assist in addressing adolescent-specific occupational challenges. This is another aspect that is needed to improve evidence-informed practice with this population of clients[12, 28, 30].

Adolescents with LDs and their parents had specific perceptions regarding what entailed effective interventions and support. Many of these perceptions had been formed throughout the adolescents' childhood during their experiences with various interventions for LDs, including their experiences with occupational therapy interventions. Both positive and negative perceptions were communicated by the participants. Perceptions regarding effective interventions for adolescents with LDs are important to take into consideration when planning occupational therapy services for this population to make them client-centred. Negative attitudes and previous experiences with similar interventions that did not yield the expected results may have a significant effect on clients' willingness to engage in intervention as well as affecting their compliance with intervention recommendations, which in turn significantly influence therapy outcomes.

Upon further reflection, it seems to be the case that various barriers to effective occupational therapy services to adolescents with LDs exist. Firstly there is not an established research basis to guide evidence-informed practice to this population as it is still a developing field both in occupational therapy and within other medical and educational fields including psychiatry and psychology[21, 256-259].

Secondly, very few services seem to be available to this population as most occupational therapy services, like many other available interventions, are focused on early intervention and early primary school remedial-based therapy. Services are also mainly rendered within specific environments like special schools. This results in little availability of occupational therapy services to larger adolescent populations with LDs in other educational environments where occupational therapists are not specifically employed to deliver such services, like adolescents attending mainstream schools or home schooling. Even in environments where occupational therapists are employed, they often need to contend with other professions like psychology and remedial teaching for time and resources to deliver the needed intervention services. A further complication is that occupational therapy is often not regarded as an essential service by persons in management positions, who are likely poorly informed regarding the occupational therapist's role in improving functional outcomes for adolescents with LDs.

Thirdly, current available intervention to adolescents with LDs also varies widely in clinical practice, sometimes not addressing occupational performance needs in a client-centred manner with clear evidence of the progress or functional outcomes of therapy.

Fourthly, from some of the parent participants' accounts of their experiences with occupational therapy and other interventions, it seems like very little attention is given to teaching compensatory methods and addressing residual (long-term) difficulties when remedial attempts show no further improvement. Therapy is often discontinued by parents when no further improvement is noticed instead of therapists communicating a plateau in progress and switching to compensatory management of difficulties.

Lastly, there is a lack of feedback from therapists and other professionals regarding realistic future expectations of the prognosis of LDs and the presence of residual long-term

difficulties that need to be managed. This inadequate communication often leads to adolescents, parents and teachers having unrealistic expectations of interventions of which they never see the functional improvement they are expecting. Consequently they lose faith in interventions, including occupational therapy intervention, thus closing the window of opportunity to later assist with compensatory and occupation-related difficulties. This lack of communication regarding the prognosis of LDs may be related to the diagnosis of LDs especially SLDs often not being formally made and / or communicated with parents. Many of these adolescents are later again seen by occupational therapists in the psychiatric field due to mental health issues arising during adolescence. The investigator is of the opinion that some of these mental health difficulties might be prevented with adequate occupation-based occupational therapy programs addressing the residual behavioural and learning difficulties during late childhood and adolescence that early intervention remedial therapies are not able to resolve.

6.3 Recommendations

Following the results from this study, the investigator suggests the following as some clinical and practice implications and recommendations for occupational therapists providing services to adolescents with LDs arising from the data collected on their perceptions on their OPPs, occupational difficulties and perspectives on interventions and supports:

The adolescent perspective and developmental phase along with their specific needs relating to this life phase need to be taken into consideration by occupational therapists planning intervention for adolescents with LDs. Therapists should familiarise themselves with the necessary physiological, psychological and occupational aspects relevant to adolescent development and take these into consideration when planning services for this population of clients.

Goal-setting needs to be done in collaboration with the adolescents and their parents in order to incorporate both their current OPPs and their need to prepare for future OPPs to ensure client-centred intervention.

All areas of occupation need to be incorporated when planning intervention instead of just focusing on one or two areas. Intervention should incorporate adolescents' need for achieving a balanced occupational pattern. Adolescents with LDs have specific developmental and occupational challenges relating both to education and other areas of occupation that need to be addressed for intervention to be effective and acceptable.

Occupational therapy intervention should not be planned in isolation and other interventions need to be taken into account so as to prevent an overloading of interventions and ultimately the continuation of a whole regime of therapies that are showing no further improvement or benefit for the adolescent and family. A greater collaboration and integration of therapies offered by various educational and medical professionals is needed to achieve this, necessitating better case management.

Seeking a formal diagnosis of a LD should be encouraged at the appropriate time, usually when remedial therapies have proven to no longer render any further improvement. Time and care should be taken by healthcare and educational professionals to provide proper information and counselling to all parties involved regarding the long-term implications of a LD in order to render realistic expectations. This will also encourage adequate management of these conditions including putting adaptive and assistive measures in place for children and adolescents with LDs.

Changing the approach of occupational therapy from a remedial to a compensatory and adaptive approach at the right time is critical to avoid fostering a negative attitude towards

intervention and to maintain the opportunity to continue providing especially adaptive intervention later on as it becomes necessary. Occupational therapists providing services to younger learners with LDs need to be educated regarding the correct approach to handling the termination of therapy and discharge from therapy. This should include communicating with parents and teachers regarding the prognosis of LDs where appropriate and the handling of residual difficulties not addressed by remedial therapies via compensatory methods. Advocating and promoting occupational therapy interventions to adolescents by these therapists and better integration between services to younger and older learners are necessary for learners to be open to potentially useful further intervention during adolescence.

Specific occupational therapy interventions to adolescents with LDs should include the learning of compensatory and adaptive skills for coping with educational demands e.g. using technology such as assistive devices along with life skills like stress and time management and social skills interventions. Intervention should also facilitate and promote adolescents' participation in activities outside the education sphere that build on their strengths and thus facilitate their experience of success and task satisfaction to foster improved self-esteem.

Occupational therapy should assist with selecting the best environment for adolescents with LDs and then advocate for the rights of adolescents with LDs within their education, home and current or future working environments and the use of adaptive methods like having test and examination writing concessions along with using adaptive technology within these environments to better facilitate their daily participation in various occupations.

Collaboration between occupational therapists and teachers, employers, parents and other adults, for example coaches may be of great assistance in helping adolescents with LDs to participate successfully in these various environments and to make and maintain the necessary adaptations needed to facilitate their participation. Occupational therapists have an important role to play in terms of educating other stakeholders regarding LDs and to

facilitate positive attitudes towards adolescents with LDs in order to gain the necessary support and assistance that they need from the adults in their daily environments.

Where possible intervention should be incorporated into the adolescents' natural environments such as the school environment as this seems to be deemed as more effective and less of a burden to adolescents and their family. Furthermore, interventions in these environments are often better adhered to, are more readily accepted and positively viewed by adolescents and their parents.

Psycho-social and socio-emotional interventions possibly in the form of group occupational therapy may be beneficial to adolescents with LDs to meet their needs for greater support as well as self-determination promotion.

Career exploration experiences and career preparation are important aspects of occupational therapy to assist adolescents with LDs to prepare for their future occupations and transition into the work place and has the added benefit of developing their emotional maturity. Assistance should be provided for these adolescents in transitioning to post-secondary and tertiary education as well as for school-to-work transition. Specifically assistance with selecting an appropriate career suited to their strengths and assistance in making necessary adaptations in the work place to compensate for weaknesses in for instance reading, planning etc., should also be incorporated to ultimately empower them in securing satisfying and self-sustaining employment. Assisting adolescents with LDs to explore possible entrepreneurship options and to develop the necessary skills to engage in such opportunities may also be invaluable to these adolescents, especially considering the employment challenges that adolescents in general face in South Africa.

Intervention should include family-centred interventions as parents, especially the mothers of adolescents with LDs, often play a key role in supporting their occupational performance and are often also in need of support to continue playing this role.

6.3.1 Recommendations for further research

It has already been stated that more research is needed to support occupational therapy services to adolescents with LDs and to endeavour for best practice occupational therapy services that are client-centred, occupation-based and evidence-informed[28, 30]. Further research that is to be recommended to support this may include a qualitative enquiry regarding the expert opinion from experienced occupational therapists that have been working with adolescents with LDs in various settings including special schools and mental health settings regarding best practice for occupational therapy services to this population. It may be useful to establish what the expert opinion is on aspects such as appropriate standardised, non-standardised and occupation-based or functional assessments, goal-setting approaches, treatment approaches, models and frame of reference that are suitable for this population as well as intervention methods, programs and techniques that are currently being used successfully.

Large scale, good quality quantitative intervention studies will then also be necessary to establish the effectiveness of occupational therapy intervention programs to adolescents with LDs compared to other available medical and educational interventions. Evidence of the effectiveness and value of occupational therapy interventions is needed to promote the role of occupational therapists with adolescents with LDs in order to motivate for better resources to implement more of these programs amongst this population.

The following review of literature was undertaken to aid in deciding on the activities that needed to be included in the card sort activity and to anticipate which occupations are generally affected by LDs in adolescence. This section will take a closer look at the specific occupations of adolescents in the areas of productivity (education, work), restoration (sleep and rest, personal activities of daily living and instrumental activities of daily living) and pleasure (leisure and play). Social participation will also be discussed as a continuum overlaid on all three categories of occupations.

The occupations of adolescents

Productivity

Education occupations

Major changes in the education area of occupation in adolescence include transferring to a new educational institution when entering high school and again when entering the work place or post-secondary education[19].

The demands of the education tasks and the management thereof also change significantly. Education tasks increase in complexity to match the development of cognitive skills, particularly executive function[18]. Academic skills like reading, writing and basic numeracy are expected to have been consolidated when entering high school. The more complex educational content in high school requires the efficient and effective use of these basic academic skills to master the content and to meet the academic demands and learning outcomes required to successfully complete successive grades[260-262].

Specific educational occupations or tasks may include listening to a teacher explaining new content, completing class tasks (e.g. answering questions in written format) and home work,

writing essays, writing and giving speeches, doing assignments alone or with a group of class mates, summarising content and studying, writing tests and exams and an array of practical tasks related to practical subjects for instance cooking during hospitality studies[261-265].

Successful participation in education occupations includes a social element of forming effective relationships with teachers, school staff and peers[20]. Taking part in break time and assembly are examples of occupations where social participation forms part of successful participation for an adolescent[20, 28]. The opportunity to be chosen to fulfil a specific leadership role may also be offered to an adolescent with associated occupations like organising meetings and performing specific duties with regard to school discipline[266].

Most educational institutions offer adolescents the opportunity to participate in extra-curricular activities like sport, cultural and other activities as well as special interest groups or clubs[263]. Participation may be motivated by leisure needs, but may also serve as informal education or development of skills and competence as part of the occupational and career choice process[18, 72]. Taking informal or part-time courses outside the school context to prepare for a career may form part of this process[18, 28, 72].

Work occupations

Adolescence is often the time when teenagers first assume the worker role, usually in terms of part-time employment. This may be from the desire to earn some extra money for own use or may be out of necessity to contribute to household income. Adverse home circumstances as in the case of child-headed households or the complexity of factors contributing to high school dropout may force an adolescent to take on a full-time worker role prematurely[19, 20, 95, 98].

Making an occupational choice regarding a career is one of the most important developmental tasks to be accomplished in adolescence. Establishing an identity and achieving greater self-awareness and insight into their personal interests and values contributes to the making of this choice. The development of prevocational skills is also very important in preparation for the worker role. Adolescents may explore careers in various ways, e.g. career exploration programs at schools[137] or volunteer work. The latter also affords the adolescent with the opportunity to contribute to the community[18, 19].

Restoration

Sleep and rest

The occupation of sleep and rest undergoes changes in adolescence and may greatly influence overall occupational performance by influencing other areas of occupation, especially education[20, 59]. Both the quantity and quality of sleep are reported to be negatively influenced by a variety of factors associated with adolescence[59-61, 87]. Four factors seemed to influence the adolescents' quantity or average time spent sleeping per night. Firstly, biologically mediated later onset sleep phase conflicts with society norms of early school starting times[60, 61, 87]. Secondly, participation in activities outside of school that may carry on until late at night like certain sports' practice or events and part-time jobs although adolescents didn't perceive this as a major factor[59, 87]. Thirdly, adolescents' increased autonomy over their own schedule and executive or planning abilities that are still developing[62, 267] may cause them to not maintain a regular sleep routine and to leave certain activities or continue participating in other activities until later at night. Examples of these might be studying or doing homework, watching TV or playing video games instead of adhering to reasonable bed times[20, 87]. Finally, their increased need for social interaction with friends, especially on social media or staying out late socialising may also lead to a decreased quantity of sleep[45, 87].

Another influence on sleep quality is the taking of stimulants. Both caffeine and illicit drug use negatively influence sleep quality in adolescents[59, 61, 87].

The effects of poor quality and quantity sleep in adolescence have recently received increased attention in literature. Adolescents getting less than eight hours sleep were reported to have lower reported health and well-being and greater feelings of depression. Education occupations were affected by poorer grades and decreased class attendance compared to adolescents that slept more hours per night. Safety during performance of some instrumental activities of daily living (IADL) were affected in terms of road safety with less sleep being associated with more motor vehicle accidents. Adolescents who slept less were reported to engage more often in risk behaviours such as choosing to engage in substance abuse and unsafe sex, thus affecting their participation in leisure occupations[59-61, 87].

Personal Activities of Daily Living (PADL)

Due to physiological changes associated with puberty like secondary sexual characteristics, e.g. facial and other hair growth, menstruation, increased oily skin secretions, and acne, new skills related to PADL are required of adolescents. These skills include aspects of personal hygiene and grooming like removing body hair, applying and cleaning make-up, refined nail care and hair styling, managing menstruation and the care of devices associated with these activities. Importantly, these skills are only learnt in adolescence and independence therein should only be expected later in adolescence[20, 22, 45]. Thus, there is a shift in focus regarding PADL in adolescence from childhood, which also impacts self-esteem and time-use.

The physical changes and the development of secondary sexual characteristics influence the adolescent's body image. Physical appearance becomes more important and adolescents spend increased time on self-care. Dressing and choice of clothes may increase belonging to a peer group. Thus adolescent development greatly influences their engagement in PADL[20].

Increased sexual drive and the forming of a sexual identity motivate adolescents to explore their sexuality. Sexuality is expressed through dressing, relationships and may include intercourse or acts associated with intercourse. Decision making regarding sexual activity and managing sexual needs emerge during this developmental phase. The choice to engage in sexual activity also brings about new PADL activities like managing contraceptive use and other sexual devices.[20, 22, 28, 45]

Instrumental activities of daily living (IADL)

Adolescents are introduced to more IADL activities as their ability to take responsibility and increased cognitive and motor skills allow for successful participation in these. There is a greater expectation for adolescents to take part in household management, i.e. chores. More challenging chores like preparing meals, shopping for their own clothes and some basic groceries, managing small amounts of money and budgeting according to their pocket money, cleaning and doing laundry, performing basic repairs, implementing basic safety procedures and taking care of pets or even younger siblings may form part of their activities [18-20, 45].

Child rearing is not usually part of an adolescent's roles, but with the choice of engaging in sexual activity, teenage pregnancy may occur. The role of parent and consequently taking care of a child may then form part of an adolescent's daily IADL activities. In some instances, as is the case in South Africa with child-headed households, an adolescent may be forced to take care of younger siblings in the absence of other adults that can take on the parent role[20, 22, 55].

The adolescent is expected to take more responsibility for activities related to maintaining their own health. These may include implementing choices regarding health habits like

choosing adequate nutrition, engaging in exercise, applying basic first aid for injuries, taking medication and making doctor's appointments when feeling sick. Preventing illness also becomes important especially the making of decisions regarding health-affecting behaviours like smoking, substance abuse and sexual behaviour in terms of preventing sexually transmitted infections and pregnancies [45].

With increased independence, adolescents start travelling in the community without their parents. Utilising community transport and doing so safely becomes another occupation that may form part of an adolescent's weekly routine. Some adolescents use public transport or school transport to get to school. Walking, riding a bicycle or later in adolescence a scooter or motorcycle are all modes of transport that may be available to an adolescent. One of the major milestones for adolescents are obtaining a learner's permit and learning to drive to eventually pass their driver's licence[20, 45].

The use of communication devices like cell phones, tablets and computers are growing more important especially to adolescents[90]. The use of these devices serves mainly a social role to be in contact with their peers[90], but it also assists with obtaining information for school projects as well as serving as communication with parents for both logistical and safety purposes. In some schools tablets with e-books have replaced textbooks and thus the skills for using these devices are influencing successful performance of education occupations[94, 268-270].

Pleasure

Leisure occupations

During adolescence play occupations transition to become more structured leisure activities including games, sports, hobbies and social events. Leisure participation during adolescence is important, as it helps adolescents to develop skills and master developmental tasks. It

also plays an important role in stress-relief, identity formation, socialisation and diversion from unhealthy behaviours like substance abuse and gangsterism[20, 72, 95, 213]. Leisure boredom has been described as a factor contributing to high school dropout[95]. An association between leisure boredom and risk behaviour has also been proposed in a review of current research, but there are not enough studies to support it as yet[160]. Two important factors appear to influence adolescents' leisure participation: changing interests and varying energy levels.

Adolescents' interests tend to change during this time period. Some critical occupational choices are made by late adolescence that also influence leisure pursuits and activities that will form part of the adult lifestyle[18, 72]. Adolescent leisure activities like participation in sport and crafts provide them with a gradual transition from spontaneous play activities characteristic of childhood to more structured adult leisure activities[213]. This also assists in fulfilling their need to develop competence and to experience a feeling of mastery and success[18, 72].

Due to the energy required for the physical growth taking place, adolescents often seem lethargic and passive leisure time activities are normal and characteristic during this period. Adolescents generally enjoy activities like listening to music and "hanging out" or socialising with their friends. More active leisure time activities may include extra-curricular activities like playing sport, practicing hobbies and playing instruments. These are often offered by their school or organisations in the community like clubs, community centres, religious and charity organisations[18, 20, 72, 95, 212, 213].

Social participation: Overlaid on all three categories of occupational experience

Pierce[271] describes the notion that all occupations take place on what she calls a "continuum of social involvement". On the one side of the continuum are "co-occupations"[28, 271] a term that describes activities that are dependent on another person or persons to take place. On the other end of the continuum are "solitary occupations" that inherently exclude other people. In the middle of the continuum are "shared occupations" which are occupations that could be engaged in alone, but are performed together with ongoing interactions[271].

For adolescents, all occupations or activities will take place somewhere on the described continuum of social involvement. New occupations emerge as a function of building relationships with especially their peer group[20, 22, 92], while some of their childhood occupations may undergo a shift on the continuum due to increased independence and lower care giving needs[45]. These new occupations may include co-occupations, shared and solitary occupations[271].

Within the adolescent's family interactions, less co-occupations centre around care giving (in contrast with early childhood) while more co-occupations focus on parents or older siblings teaching the adolescent new or emerging PADL and IADL tasks e.g. learning to shave or to cook[20, 45]. As soon as the adolescent can perform these tasks independently with the required quality and safety awareness, these occupations usually move along the social continuum to either being performed as shared occupations alongside other family members or as solitary occupations[45, 92]. Shared occupations like family dinners and watching television may remain, while activities centring on common interests like playing a certain sport or shopping may increase as adolescents' leisure interests develop to more adult occupations[92]. Adolescents may enjoy more solitary or shared activities that allow them to express their emotions due to becoming more introspective. Quiet leisure activities like journaling, writing poetry, listening to music, meditating, doing art and reading are some activities that may serve this purpose[19, 20, 22].

Appendix A: Development of questions and card sort activity

A large part of education occupations consist of the co-occupation of teaching mainly in the form of attending classes[271]. Teacher interactions usually change in high school, with greater responsibility being given to adolescents to monitor their own learning and understanding and to let the teacher know when extra help is needed[18, 262]. Doing group assignments may be another highly interactive group co-occupation that adolescents need to increasingly negotiate. Doing homework and projects as well as studying for tests and preparing speeches usually move toward the solitary end of the social continuum, but may also be engaged in as a shared occupation when studying alongside friends or with a study group[19, 20].

Shared occupations within the peer group increase during adolescence. These tend to centre more on leisure activities like "hanging out" and listening to music. Girls tend to enjoy talking to their friends or shopping together, while boys tend to engage more in common interest activities like playing or watching sport and playing video games[93]. Dating and sexual activity are new co-occupations that emerge in adolescence, by default requiring a partner to perform[20, 59, 92, 93, 271].

Technology has ushered in a new form of interactive occupations on social media. Chatting with peers on their cell phones is a form of co-occupation while viewing and sharing information about themselves on social platforms like Facebook and Twitter which may be shared or even solitary occupations with the intention of forming and maintaining various relationships. Cyberdating is a form of online dating that may be engaged in[20, 90, 92, 93].

A phenomenological study by Mthembu *et al.*[90] describes the influence of social networking sites on adolescents' occupational performance. The study describes the integral part that social networking sites are playing in facilitating adolescents' interaction with their peer group. It also describes adverse effects like occupational imbalance due to chatting on their

phones for extended periods of time or trying to multi-task between monitoring their messages and school work for instance. Adolescents' perspective was that this does not interfere with their school work[90] but some studies show the contrary[272, 273]. Consequently it may be deduced that adolescents are often not aware of the influence that social networking sites have on their occupational performance. Subrahmanyam and Greenfield[94] supported these findings in their article regarding online communication and adolescent relationships.

Although spending increased time with peers is developmentally appropriate, peer pressure may also usher in dysfunctional activity patterns. Engaging in dysfunctional shared and co-occupations like substance abuse, gangsterism, criminal behaviour and promiscuous sexual activity may be some of the consequences of peer pressure and inadequate use of leisure time with friends[18, 20, 22, 59, 92, 93].

Increased interactions within the greater community bring about new shared and co-occupations. A unique set of shared or co-occupations are the result of the rites and traditions embedded in an adolescent's culture and religion. For instance specific dances and the practice of circumcision is part of some African cultures[22]. Older adolescents also reach the age where they are allowed to participate in political activities like voting in elections and debating opinions on political and social decisions[20, 22]. Occupations related to employment will also bring about co-occupations and shared occupations like learning from someone on the job or working alongside a colleague[18, 19].

Social interactions in each occupation area are critical at this developmental stage for developing the social skills that will greatly influence the successful attainment of life tasks[62]. Life tasks like establishing a career and securing a job, finding a life partner and securing satisfactory friendships as well as establishing themselves as independent adults outside the

comfort of their parents' home rely on their ability to build, maintain and negotiate changes in their relationships with others[20, 22, 55].

Having explored the usual occupations associated with adolescence, literature regarding the impact of LDs on occupational performance in adolescence will now be reviewed.

Occupational performance difficulties associated with learning difficulties

The occupations around the area of education are often the most affected by LDs and this is also often a main reason for seeking intervention[7, 46]. Studies reporting on the impact of LDs on education occupations described adverse outcomes like academic underachievement[7], poorly developed literacy skills like reading[8], a greater likelihood of grade repetition (up to three times as likely when compared to peers)[8, 120], school failure and dropout[8, 52, 120]. A greater incidence of behavioural problems in classroom settings was described including more absenteeism and more incidences of detention and expulsion[46]. After high school, adolescents with LDs had lower levels of attendance and graduation from post-secondary education. They were described to have utilised vocational training more often than their peers, but also showed decreased graduation rates from these programs[8]. Ditterline *et al.*[274] reported greater difficulties with adaptive behaviour related to functional academics, school living and self-direction in a study that included younger adolescents with SLDs.

There are contradictory reports regarding the impact of LDs on adolescents' current and future participation in work occupations. Some studies report employment rates being the same as their peers[16] whereas follow-up studies describe fewer of the LD population being employed[8, 53, 275] and with lower household incomes regardless of their academic achievement level[8, 53]. They were more often employed in less skilled jobs and employers had perceived them as having greater impairments than their colleagues with lower levels of job performance[8, 52]. A greater number were reported to had been dismissed[8, 52, 275].

An association between LDs and sleep problems have been reported by Fakier and Wild[245]. Poor sleeping patterns are reported to be common in ADHD, with related increased daytime sleepiness or low arousal levels[121, 246, 276-279]. Pharmacotherapy for ADHD is also described to adversely affect sleep patterns[279]. No studies were found investigating sleep patterns and SLDs in adolescence specifically, but sleep problems have been shown to adversely influence general learning abilities and academic achievement in both children and older students[280]. Fakier and Wild[245] described associations between LDs, sleep difficulties and substance abuse in adolescents. According to the study inadequate sleep quantity was associated with greater overall substance abuse of a variety of substances in both adolescents with LDs attending a remedial school and adolescents without LDs attending mainstream schools in Cape Town, South Africa. The study went on to report a greater incidence of sleep difficulties amongst the adolescents with LDs, but that this did not necessarily indicate a greater risk for substance abuse compared to the non-LD group. There were however a difference between the types of substances that they chose to use.

There is very little literature available describing the influence of LDs on PADL or self-care activities. Loe and Feldman[46] mentioned poor self-care as a functional problem related to ADHD. Ditterline *et al.*[274] described poor scores on adaptive behaviour in daily living in the domestic and personal areas of young adolescents and children with SLDs. There were more studies that described the influences of LDs on IADL activities; this will be discussed in the next section. Cermak[124] included substance abuse with this category but it may be more suited to health management that is also part of IADL as well as aspects of leisure and social participation. The executive function difficulties described as part of the LD picture, especially relating to planning and organisation of time and objects, leads one to expect difficulties with managing a self-care routine in a time-effective and -efficient manner, for instance getting ready for school on time. Some studies described trends of engagement in sexual activities that are different from other adolescents, due to their increased risk behaviour. Adolescents with ADHD were reported to engage in more sexual risk behaviour

and at an earlier age than their peers. More teenage pregnancies were also reported amongst this group[8, 52, 237]. This could relate to both difficulties with executive cognitive function (e.g. impulse control) and managing contraceptive devices, but also with adolescents' feelings of being invincible and discounting the possibility of the adverse consequences of sexual activities happening to them[22].

Instrumental activities of daily living for adolescents with LDs seem to be more affected than their PADL activities. Older adolescents and adults with LDs were reported to remain dependent on their parents financially for longer than their peers and those with ADHD had a greater chance of being homeless[8]. They were reported to struggle to manage money which included impulsive buying, forgetting to pay bills and making credit card payments as well as difficulty with saving and handling money[8, 232]. Some studies reported that adolescents and young adults with ADHD were poorer drivers. They had lower or more variable reaction times, an increased number of errors due to impulsiveness, more scrapes and crashes and more driving violations[8, 232, 281]. Adolescents and young adults with ADHD were reported to have difficulty with management of their health[8, 133]. This included increased engagement in habits like smoking and alcohol use and not exercising regularly[8]. They were also more inclined to underestimate and deny the impairment caused by their ADHD and often disengaged from treatment during their adolescent years[8, 133].

The influence of ADHD and SLDs on adolescents' leisure participation has not been researched exclusively. Ditterline *et al.*[274] reported that young adolescents and children with SLDs and emotional disturbance (some with co-morbid ADHD) scored lower on a measure of adaptive behaviour in the area of leisure while those with only SLDs scored average[274]. In contrast a study by Henry[282] noted that the leisure interests of adolescents with LDs were relatively the same as non-disabled peers and adolescents with psychiatric and physical disabilities. The only difference noted was their greater involvement in active leisure activities like sport. This was proposed by the authors to be due to their sampling as the LD

group was younger on average than the other groups of participants[282] and therefore further research with groups that are matched by age is necessary. Brook and Boaz[233] reported that adolescents with LDs' daily routine generally included activities like watching television, interaction with pets and physical activities like sport.

Various studies described an increased incidence of substance abuse amongst adolescents with ADHD while studies on SLDs and substance abuse were inconsistent. Leisure boredom has been associated with increased substance abuse mainly in high-risk youth in special programs, which may include adolescents with ADHD and SLDs, but other factors like personality, intellectual ability, creativity, moral standards and meaningful relationships were also stated to play a significant role in the choice of abusing substances[160, 233, 283, 284].

Adolescents with ADHD were reported to be at greater risk for committing crimes, being arrested and being detained[8, 54]. Older studies report an increase in delinquency amongst adolescents with LDs, but more recent research have proposed that these adolescents are just tried more often for their crimes than their peer group[8].

Learning difficulties are reported to have a significant influence on the social participation of adolescents. Poor social skills are reported in adolescents with ADHD which may be at the root of many of the social difficulties described in the literature[133, 233]. ADHD also contributed to greater anti-social behaviour in adolescence[54, 237]. Some studies on adolescents with SLDs reported poorer social skills[8, 233], while one only reported difficulties with communication[274]. Comorbid emotional difficulties increased the occurrence of social skills deficits in children and young adolescents with SLDs[274]. Some qualitative studies reported that adolescents with SLDs had lower self-esteem, they felt different from their peers and reported to struggle with verbal expression in social situations[8].

Adolescents with LDs were reported to have fewer close friends, difficulty with meeting new people, greater conflict with friends and difficulty with sustaining friendships[8, 52, 233, 235, 236]. Glass *et al.*[234] on the other hand reported that adolescents with ADHD have greater difficulties with interactions in their bigger peer group but that they do have satisfying individual friendships. They did however report that adolescents with ADHD tend to overestimate and overrate the quality of their friendships compared to parent and teacher ratings[234]. Adolescents with SLDs specifically were reported to have a decreased number and quality of romantic relationships[8]. This seems to contrast in a sense with the literature that reported a greater amount of adolescents with LDs (including ADHD) being sexually active earlier in life, more of them having been treated for sexually transmitted infections and a greater number of them becoming parents before their peers[8, 52, 237]. This may be explained by the impulsiveness associated with ADHD that may lead these adolescents to engage in unsafe sexual behaviour with willing partners without being in a stable and good quality relationship[232]. Some research suggested that young adults with SLDs marry later in life, while other sources reported that they married at an age similar to the norm. Qualitative research reported that they experienced increased marriage problems. They needed to rely more on their spouses for tasks where performance is affected by their disability and had less opportunity to reciprocate help, often resulting in a power imbalance[8, 115].

A greater amount of conflict with parents is reported by various studies[133, 233, 237]. On the one hand this is attributed to adolescents' cognitive and social development, resulting in their being able to argue more logically and eloquently, as well as their questioning others' (specifically their parents') values. In the case of adolescents with LDs, studies have found a number of unique factors that exacerbate this. Parents of adolescents with LDs were described to have greater financial pressures due to various interventions and medication needed as well as extra lessons for education occupations[8, 237]. Adolescents with LDs were reported to stay dependant on their families for longer due to difficulties with completing

education and finding jobs to adequately support themselves[8]. Studies further report that the parents of adolescents with LDs have more stressors, e.g. financial stress, emotional stress and worry about their children's future. The increased stress results in these parents having a greater susceptibility to developing depression and other psychiatric conditions[237]. Although attributed to the stress of caring for a child or adolescent with ADHD, it may also be linked to a greater possibility of having a genetic predisposition to these conditions[16, 285]. Sibling relationships are also reported to be poor. Studies report greater stress on siblings of children with ADHD due to violent and controlling acts by their ADHD siblings, being expected to look out for them due to their emotional immaturity and consequently experiencing greater anxiety and other negative emotions[237]. No studies reported on whether this continued during adolescence. Siblings are also more prone to be diagnosed with ADHD themselves[16].

DEMOGRAPHIC QUESTIONNAIRE

TO BE KEPT SEPARATE BY THE INVESTIGATOR

Dear Parent

Please complete the following form with information regarding you and your adolescent child upon decision to take part in the study.

1. Mother's name & surname: _____
2. Father's name & surname: _____
3. Adolescent's name & surname: _____
4. Adolescent's birth date and age: ____/_____/_____ _____ years

Contact details

Cell _____

Telephone _____

Email address _____

Appendix B: Demographic questionnaire

Code _____

5. Current school & grade: _____

Has your child been diagnosed with a learning disability? Yes / No

If yes, please provide the following details:

6. Doctor that made the diagnosis: _____

7. Type of doctor :
   (e.g. pediatrician, neurologist, psychiatrist, general practitioner) _____

8. When was the diagnosis made? _____

9. How old was your child when the diagnosis was made? _____ years old

10. Is your child currently on any medication (please state the names and dosages)? _____

11. Does your child currently receive any form of therapy or intervention for his / her learning disability?
    Please provide details of the current intervention: _____

12. Does your child have any other medical / mental health conditions?
    (e.g. epilepsy, a traumatic brain injury, depression, conduct disorder). _____

Appendix C: Cards of occupations for card sort activity

(Pictures blocked out for the sake of copyright.)

 Studying	 Using a computer
 Having a group discussion	 Doing school projects
 Writing tests and exams	 Doing a speech

Appendix C: Cards of occupations for card sort activity

Attending classes

Driving / Learning to drive

Managing money & budget

Organising time and things

Attend a party

Playing sport

Appendix C: Cards of occupations for card sort activity

Chatting on cell phone

Going to the movies

Watching TV

Playing games

Spending time with friends

Shopping

Appendix C: Cards of occupations for card sort activity

 Playing music	 Doing art / drawing
 Listening to music	 Sleeping
 Taking shower	 Dressing

 Washing dishes	 Doing laundry
 Taking medication	 Eating
 Cooking	 Cleaning room / house

Appendix C: Cards of occupations for card sort activity

Dating 	 Caring for pets
 Religious activities	 Having a part-time job
 Involvement in the community	 Gardening
Riding a bike 	 Exercising

Appendix C: Cards of occupations for card sort activity

 Exploring careers	 Doing a job
 Getting married / spending time with your spouse	 Caring for your children
 Spending time with family	 Sexual activity

Appendix C: Cards of occupations for card sort activity

Going on holiday 	Celebrating special events 
Spending time in nature 	 Working yourself up in a job
 Starting / Running your own business	 Staying in your own house

Appendix C: Cards of occupations for card sort activity

Developing self / career 	Meeting new people 
Reading books 	

Appendix D: Focal Questions for Focus Groups / Interviews and Focus Group / Interview process

- Focus groups / interviews with adolescents

Question	Prompting / cueing questions
1. Which three activities in each category do you think are the most important for you (and for other adolescents with learning difficulties in general) at the moment?	(Direct the participant's attention towards the cards with pictures of activities used in the warm-up activity as cues for thinking about important activities.)
2. Which three activities in each category do you think will be most important for you (and for other adolescents with learning difficulties) when you have finished school?	How are your current activities helping you prepare for these activities that will be important in future?
3. Which three activities in each category do you have the most difficulty with at the moment?	Do you have difficulty with..... (name some of the occupations on the list)?
4. Who / What has helped you with these activities that you identified to be having difficulty with?	Are there anyone that you think will be able to help you with any of these activities / difficulties?

- Interviews with parents of adolescents

Question	Prompting / cueing questions
1. Which three activities in each category do you think are the most important for your son/daughter (and for adolescents with learning difficulties in general) at the moment?	(Direct the participant's attention towards the cards with pictures of activities used in the warm-up activity as cues for thinking about important activities.)
2. Which three activities in each category do you think will be most important for your son/daughter (and for other adolescents with learning difficulties) when they have finished school?	How are your son's/daughter's current activities helping him/her prepare for these activities that will be important in future?
3. Which three activities in each category does your son/daughter have the most difficulty with at the moment?	Does your child have difficulty with..... (name some of the occupations on the list)?
4. Who / What has helped your child with these activities that your child has difficulty with?	Are there anyone that you think will be able to help your child with any of these activities / difficulties?

The process that will be followed in conducting the focus group is as follow:

Step 1:	Welcoming, explanation of the group / interview procedure and stating the objectives of the group / interview. Information was provided regarding the occupational therapy view on occupation and activity. The sub-categories of productivity, pleasure and restoration was presented to the group / interviewee as described in Pierce's Occupation by Design approach[12].
Step 2:	An introductory and warm-up activity was presented to the group / interviewee to introduce the concepts of productivity, pleasure, and restoration as categories of occupations. The group / interviewee was handed cards of different daily activities (e.g. studying, playing sport, sleeping, eating etc.). Going around in the circle the participants were asked to assign their cards to one of the three categories. Discussion was facilitated on whether the other participants agree on the category it was assigned to. The cards were placed together to form a list.
Step 3:	After two rounds of assigning cards to the categories and discussion regarding the assignment, all the other activity cards were briefly introduced to the participant(s). The participant(s) were then asked whether there are any other activities that they would like to add to the collection or list of activities. Extra activities were written on a card and added to the list of activities.
Step 4:	The first focal question was presented to the group participants / interviewee (See Appendix C for questions). Participants were given a few minutes to reflect on the question and then wrote down their three(or their son's/daughter's in the case of the parents) top three current and future significant occupations within the categories of productivity, pleasure and restoration in order of priority (the cards of the different activities from the warm-up activity were used for cueing).

Step 5:	The participants were asked to share the occupations they listed as their OPPs in each category. A discussion was then facilitated to clarify and discuss the OPPs that they listed.
Step6:	Steps 3 and 4 were repeated for the second focal question.
Step 7:	Focal question number three was posed to participant(s) and they were asked to identify and explain the occupations (with reference to the activity cards) that adolescents with LDs experience difficulties with performing.
Step 8:	The fourth focal question was presented to the participant(s) as more of an open-ended question and their perspectives were asked on the intervention that they have received thus far (who had helped them the most) that had been effective in improving participation in the identified difficult occupations.
Step 9:	Participants were given an opportunity to add any comments regarding the topics discussed.

Appendix E: Ethical Clearance Certificate

R14/49 Mrs Loani Marx

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M131034

NAME: (Principal Investigator)	Mrs Loani Marx
DEPARTMENT:	Occupational Therapy University of the Witwatersrand
PROJECT TITLE:	The Perceptions of Occupational Performance Priorities of Adolescents with Learning Difficulties
DATE CONSIDERED:	25/10/2013
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Mrs Denise Franzsen
APPROVED BY:	Professor PE Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	02/12/2013

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

1

Occupational Therapy

School of Therapeutic Sciences • Faculty of Health Sciences • 7 York Road, Parktown 2192, South Africa
Tel: +27 11 717-3701 • Fax: +27 11 717-3709 • E-mail: denise.franzsen@wits.ac.za

TITLE OF STUDY

The perceptions of occupational performance priorities for adolescents with learning difficulties.

[Relevant authority's name]

[Relevant authority title]

[Institution name]

Dear Sir / Madam

I am Loani Marx, a masters student in the Department of Occupational Therapy at the University of the Witwatersrand I am requesting permission to do this study with adolescents attending your school / practice and their parents. I will approach the parents of these adolescents (to be recruited by the staff working at your institution) to participate in the study and give permission for their children to take part as well.

INTRODUCTION

This is a request for permission to make contact with possible participants for a research study at you institution with assistance from the relevant staff that are in contact with them. The following information is provided for you to make an informed decision on whether you are willing to consent to the procedures involved in the research study. If anything is unclear, you are invited to contact the investigator to explain or provide further information.

THE NATURE AND PURPOSE OF THE STUDY

This study will aim to identify and gather information regarding the perceptions of adolescents with learning difficulties and their parents regarding the most important current and future occupations as well as the occupations that they currently experience the most difficulties with in the areas of being productive (reaching their goals), doing things that they enjoy and in self-care activities. When we talk about occupations in this study, we are not just talking about the possible things learners will do as a job one day, but also about the activities that they do and will be doing in future to live on their own and to live a happy life.

EXPLANATION OF PROCEDURE TO BE FOLLOWED

The staff providing services to adolescents at your institution will be approached to recruit and gain consent from participants meeting the inclusion criteria for the study. Participants that consent to participating in the study will take part in a focus group or interviews. The focus group or interview will consist of a discussion regarding the current and future occupations that are important and difficult for adolescents with learning difficulties. If it is possible for you to provide a venue that is familiar to the participants and comfortable for the focus group or interview to be held, it will be greatly appreciated. Alternatively another venue will be arranged where it will be convenient for the participants to participate in the focus group or interview. The focus group or interview will be audiotaped for record purposes and to use in analysing and identifying the occupational performance priorities mentioned. The focusl groups and interviews will be transcribed verbatim for the analysis. The investigator will perform member checks with some of the participants to confirm occupational performance priorities identified. A process of content analysis will be carried out to label different occupations, categorise them and establish themes.

RISK AND DISCOMFORT INVOLVED

There are no risks in the study but confidentially cannot be ensured because of the groups being used to collect data. In reporting the results, participants will remain anonymous.

Please note that participants are allowed to refuse to participate or withdraw from the study at any point. There will be no negative consequences for withdrawing and results will still be available to participants who wish to withdraw.

POSSIBLE BENEFITS OF THIS STUDY

Participation in the study will contribute to the improvement of occupational therapy intervention provided to adolescents with learning difficulties. The results will be made available to all participants who are interested.

ETHICAL APPROVAL

Ethical approval for the study was obtained from the University of the Witwatersrand Human Research Ethic Committee (HREC) (ethical clearance no. M131034).

FURTHER INFORMATION

For any further questions or queries regarding this study, you are welcome to contact the investigator, Mrs. Loani Marx, cellphone nr. 084 205 5476 or send and e-mail to loanidk@gmail.com.

Should there be any ethical queries about the research please feel free to contact the Human Research Ethics Committee (HREC) Chairman Prof P Cleaton-Jones at 011 7171234 or anisa.keshav@wits.ac.za for reporting of complaints / problems

Thank you

Loani Marx

Appendix F: Institutional consent forms

PERMISSION TO COMPLETE STUDY

I _____ give permission for the study to be completed at [institution name].

_____ _____

Signature of relevant authority Date

_____ _____

Investigator Date

_____ _____

Witness Date

Occupational Therapy

School of Therapeutic Sciences • Faculty of Health Sciences • 7 York Road, Parktown 2192, South Africa
Tel: +27 11 717-3701 • Fax: +27 11 717-3709 • E-mail: denise.franzsen@wits.ac.za

TITLE OF STUDY

The perceptions of occupational performance priorities for adolescents with learning difficulties.

[Addressed to relevant staff member]

[Staff member title]

[Institution name]

Dear Sir / Madam

I am Loani Marx, a masters student in the Department of Occupational Therapy at the University of the Witwatersrand I am requesting permission to do this study with adolescents receiving intervention at your institution and their parents. I am kindly requesting your assistance in identifying adolescents that meet the inclusion criteria for the study and to assist me in requesting their and their parents' permission for them and their parents both to take part in the study.

INTRODUCTION

This is a request for permission to make contact with possible participants for a research study at your institution. The following information is provided for you to make an informed decision on whether you are willing to consent to the procedures involved in the research study. If anything is unclear, you are invited to contact the investigator to explain or provide further information.

Appendix G: Recruiting staff consent form

THE NATURE AND PURPOSE OF THE STUDY

This study will aim to identify and gather information regarding the perceptions of adolescents with learning difficulties and their parents regarding the most important current and future occupations as well as the occupations that they currently experience the most difficulties with in the areas of productivity, pleasure and restoration.

EXPLANATION OF PROCEDURE TO BE FOLLOWED

You will be requested to identify adolescents that have received / are receiving intervention at your institution, meeting the following criteria:

Inclusion criteria

Adolescents: 13 - 21 years old, that meets the criteria for diagnosis of either ADHD and/or a learning disorder.

Parents: The parent of an adolescent between the ages of 13 and 21 years old with a diagnosis of either ADHD and/or a learning disorder. The parent(s) must the primary caregivers and have significant involvement and contact with the adolescent.

Exclusion criteria

Adolescents (and parents of such adolescents) who have another co-existing psychiatric, neurological or physical disorders including cerebral palsy, traumatic brain injuries and below average intelligence which will cause a significantly different pattern of dysfunction in terms of the occupations affected.

You will be provided with information and consent forms to distribute to the identified adolescents and their parents for the purposes of gaining consent for their participation in the study and to be contacted by the investigator.

Participants that have consented to participate in the study will contacted to take part in a focus group or individual interviews. If it is possible for you to provide a venue that is familiar and comfortable for the focus group or interviews to be held, it will be greatly appreciated. Alternatively another venue will be arranged where it will be convenient for the participants to participate in the focus group or interviews.

The focus group and interviews will consist of a discussion regarding the current and future occupations that are important and difficult for adolescents with learning difficulties. The focus group and interviews will be audiotaped for record purposes and to use in analysing and identifying the occupational performance priorities mentioned. The focus groups and interviews will be transcribed verbatim for the analysis. The investigator will perform member checks with some of the participants to confirm occupational performance priorities identified. A process of content analysis will be carried out to label different occupations, categorise them and establish themes.

RISK AND DISCOMFORT INVOLVED

There are no risks in the study but confidentially cannot be ensured because of the group design being used to collect data. In reporting the results, participants will remain anonymous.

Please note that participants are allowed to refuse to participate or withdraw from the study at any point. There will be no negative consequences for withdrawing and results will still be available to participants who wish to withdraw.

POSSIBLE BENEFITS OF THIS STUDY

Participation in the study will contribute to the improvement of occupational therapy intervention provided to adolescents with learning difficulties. The results will be made available to yourself, the institution and all participants who are interested.

ETHICAL APPROVAL

Ethical approval for the study was obtained from the University of the Witwatersrand Human Research Ethic Committee (HREC) (ethical clearance no. M131034).

FURTHER INFORMATION

For any further questions or queries regarding this study, you are welcome to contact the investigator, Mrs. Loani Marx, cell phone nr. 084 205 5476 or send an e-mail to loanidk@gmail.com.

Appendix G: Recruiting staff consent form

Should there be any ethical queries about the research please feel free to contact the Human Research Ethics Committee (HREC) Chairman Prof P Cleaton-Jones at 011 7171234 or anisa.keshav@wits.ac.za for reporting of complaints / problems

Thank you

Loani Marx

Appendix G: Recruiting staff consent form

INFORMED CONSENT TO ASSIST IN RECRUITMENT OF RESARCH PARTICIPANTS FOR THIS STUDY

I declare that I understand the information regarding the study: The perceptions of occupational performance priorities for adolescents with learning difficulties

and the procedures involved in assisting the investigator with recruitment of appropriate participants. I have been given an opportunity to ask questions regarding the information.

I, _____ (name) hereby

☐	give consent	Please tick the relevant box
☐	do not give consent	

to assist in the recruitment of participants for this study.

_____ _____

Signature of occupational therapist Date

_____ _____

Investigator Date

_____ _____

Witness Date

Contact details

Cell _____

Telephone _____

Email address _____

PARTICIPANT (PARENT) INFORMATION AND CONSENT LETTER

TITLE OF STUDY

The perceptions of occupational performance priorities for adolescents with learning difficulties.

Hello,

I am Loani Marx, a masters student in the Department of Occupational Therapy at the University of the Witwatersrand. This is an invitation for participating in a research study. The following information is provided for you to make an informed decision on whether you would like to participate. Please make sure that you understand all the procedures involved before agreeing to participate. If anything is unclear, please ask the investigator to explain or provide further information.

THE NATURE AND PURPOSE OF THE STUDY

This study will aim to identify and gather information on the perceptions of adolescents with learning difficulties and their parents regarding the most important current and future occupations as well as the occupations that they currently experience the most difficulties with in areas of being productive (reaching their goals), doing things that they enjoy and in self-care activities. When we talk about occupations, we are not just talking about the possible things your child will do as a job one day, but also about the activities that he / she do and will be doing in future to live on their own and to live a happy life.

EXPLANATION OF PROCEDURE TO BE FOLLOWED

I am requesting that you and your child take part in an interview or nominal group. The interview or nominal group will consist of a discussion regarding the current and future occupations that are important and difficult for adolescents with learning difficulties. These interviews or groups will be held at a place convenient for you and your child. The parents and adolescents will be interviewed or attend groups separately. The interviews or groups

will take about one to two hours each to complete. I might request a second appointment in case some extra information is needed.

I am also asking permission to audiotape the interviews or groups for record purposes to use in analysing and identifying the occupational performance priorities mentioned. These tapes will be stored for six years in a secure location according to HPCSA regulations and they will then be destroyed

RISK AND DISCOMFORT INVOLVED

There are no risks involved. Confidentiality cannot be ensured when attending a group discussion, but will be respected as far as possible and results will be reported anonymously.

Please note that participation is voluntary and refusal to participate will have no affect on your child's therapy and no consequences. You and your child are allowed to withdraw from the study at any point. There will be no negative consequences for withdrawing.

POSSIBLE BENEFITS OF THIS STUDY

Participation in the study will contribute to the improvement of occupational therapy intervention provided to adolescents with learning difficulties. The results will be made available on request.

ETHICAL APPROVAL

Ethical approval for the study was obtained from the University of the Witwatersrand Human Research Ethics Committee (HREC) (ethical clearance no. M131034). Relevant consent was also obtained from the Gauteng Department of Education and other relevant persons from the different institutions and practices.

FURTHER INFORMATION

For any further questions or queries regarding this study, you are welcome to contact the investigator, Mrs. Loani Marx, at 084 205 5476 or send an e-mail to loanidk@gmail.com.

Appendix H: Parental consent form

Should there be any ethical queries about the research please feel free to contact the Human Research Ethics Committee (HREC) Chairman Prof. P. Cleaton-Jones at 011 7171234 or anisa.keshav@wits.ac.za for reporting of complaints / problems.

If you are willing to participate please sign the consent documents on the next page and provide your contact details so I can contact you to arrange the time and date for the group.

Thank you

Loani Marx

Appendix H: Parental consent form

INFORMED CONSENT TO PARTICIPATE IN THIS STUDY

I declare that I understand the information regarding the study: The perceptions of occupational performance priorities for adolescents with learning difficulties

and the procedures involved in participating. I have been given an opportunity to ask questions regarding the information.

I, _____ (name) hereby

☐ give consent ☐ do not give consent	Please tick the relevant box

to participate in this study.

_____ _____

Signature of participant Date

_____ _____

Investigator Date

Contact details

Cell _____

Telephone _____

Email address _____

Appendix H: Parental consent form

CONSENT TO BE AUDIOTAPED

I _____ give permission for the interview or group that I participate in to be audiotaped. I am aware these audio files will be stored for six years in a secure location according to HPCSA regulations and that they will then be destroyed

Signature _____

Date _____.

Appendix H: Parental consent form

CONSENT FOR CHILD TO PARTICIPATE IN THIS STUDY

I declare that I understand the information regarding the study and the procedures involved in participating. I have been given an opportunity to ask questions regarding the information.

I, _____ (name) parent / legal guardian of

_____ (adolescent participant's name) hereby

☐	give consent	Please tick the relevant box
☐	do not give consent	

for my child to participate in this study.

_____ _____

Signature of parent Date

_____ _____

Signature of adolescent Date

_____ _____

Investigator Date

_____ _____

Witness Date

Appendix H: Parental consent form

CONSENT FOR CHILD TO BE AUDIOTAPED

I _____ (name of parent / legal guardian) give permission for the interview or group my child _____ (adolescent participant's name) participates in to be audiotaped. I am aware these audio files will be stored for six years in a secure location according to HPCSA regulations and that they will then be destroyed

Signature _____

Date _____.

INFORMATION LETTER (ADOLESCENT PARTICIPANTS)

TITLE OF STUDY

The perceptions of occupational performance priorities for adolescents with learning difficulties.

Hello

I am Loani Marx, a masters student in the Department of Occupational Therapy at the University of the Witwatersrand. This is an invitation for participating in a research study. The following information is provided for you to make an informed decision on whether you would like to participate. Please make sure that you understand all the procedures involved before agreeing to participate. If anything is unclear, please ask the investigator to explain or provide further information.

THE NATURE AND PURPOSE OF THE STUDY

This study will aim to identify and gather information on the perceptions of adolescents with learning difficulties and their parents regarding the most important current and future occupations as well as the occupations that they currently experience the most difficulties with in the areas of being productive (reaching your goals), doing things that you enjoy and in self-care activities. When we talk about occupations, we are not just talking about the possible things you will do as a job, but also about the activities that you have to do to live on your own and to live a happy life.

Appendix I: Adolescent consent form

EXPLANATION OF PROCEDURE TO BE FOLLOWED

I am requesting that you take part in an interview or nominal group. The interview or nominal group will consist of a discussion regarding the current and future occupations that are important and difficult for adolescents with learning difficulties. The interview or nominal group will be held at a place convenient for you. Your parents will meet separately for a different interview or group from you. The interview or nominal group will take about one to two hours to complete. I may request that you attend a second interview or group, if the discussion is not completed in the first interview or group.

I am also asking permission to audiotape the interview or group for record purposes to use in analysing and identifying the occupational performance priorities mentioned. These recordings will be stored for six years in a secure location according to HPCSA regulations and they will then be destroyed.

RISK AND DISCOMFORT INVOLVED

There is no risks involved but please note the nature of the research means that confidentiality cannot be ensured when you are part of discussion groups. In reporting the results, your name will not be used.

Please note that it is your decision to participate or not and if you decide not to participate it will have no affect on your therapy and no negative consequences. You are allowed to withdraw from the study at any point. There will be no negative consequences for withdrawing.

POSSIBLE BENEFITS OF THIS STUDY

Participation in the study will contribute to the improvement of occupational therapy intervention provided to adolescents with learning difficulties. The results will be made available on request.

Appendix I: Adolescent consent form

ETHICAL APPROVAL

Ethical approval for the study was obtained from the University of the Witwatersrand Human Research Ethic Committee (HREC) (ethical clearance no. M131034). Relevant consent was also obtained from the Gauteng Department of Education and other relevant persons from the different institutions and practices.

FURTHER INFORMATION

For any further questions or queries regarding this study, you are welcome to contact the investigator, Mrs. Loani Marx, at 084 205 5476 or send an e-mail to loanidk@gmail.com.

Should there be any ethical queries about the research please feel free to contact the Human Research Ethics Committee (HREC) Chairman Prof. P. Cleaton-Jones at 011 7171234 or anisa.keshav@wits.ac.za for reporting of complaints / problems.

Thank you

Loani Marx

Appendix I: Adolescent consent form

SIGNED ASSENT / CONSENT TO PARTICIPATE IN THIS STUDY

I declare that I understand the information regarding the study and the procedures involved in participating. I have been given an opportunity to ask questions regarding the information.

I, _____ (name) (adolescent participant's name) hereby

☐ give consent	Please tick the relevant box
☐ do not give consent	

to participate in this study.

_____ _____

Signature of adolescent Date

_____ _____

Investigator Date

_____ _____

Witness Date

Contact details

Cell _____

Telephone _____

Appendix I: Adolescent consent form

Email address _____

ASSENT / CONSENT TO BE AUDIOTAPED

I _____ (name of adolescent participant) agree to the interview or group I participate in being audiotaped. I am aware that these audio files will be stored for six years in a secure location according to HPCSA regulations and that they will then be destroyed

Signature _____

Date _____.

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

For administrative use:
Reference no. D2015 / 368 A

GDE AMENDED RESEARCH APPROVAL LETTER

Date:	**9 January 2015**
Validity of Research Approval:	**9 February 2015 to 2 October 2015**
Previous GDE Research Approval letter reference number	**D2015/015 dated 10 April 2014**
Name of Researcher:	**Marx L.**
Address of Researcher:	**P. O. Box 17019; Sunward Park; 1470**
Telephone and/or Fax Numbers:	**084 2055 476; 076 747 3686**
Email address:	**loanidk@gmail.com**
Research Topic:	**The perceptions of occupational performance priorities for adolescents with learning difficulties**
Number and type of schools:	**THREE LSEN Schools**
District/s/HO	**Ekurhuleni South; Gauteng East and Johannesburg North**

Re: Approval in Respect of Request to Conduct Research

This letter serves to indicate that approval is hereby granted to the above-mentioned researcher to proceed with research in respect of the study indicated above. The onus rests with the researcher to negotiate appropriate and relevant time schedules with the school/s and/or offices involved to conduct the research. A separate copy of this letter must be presented to both the School (both Principal and SGB) and the District/Head Office Senior Manager confirming that permission has been granted for the research to be conducted.

The following conditions apply to GDE research. The researcher may proceed with the above study subject to the conditions listed below being met. Approval may be withdrawn should any of the conditions listed below be flouted:

2015/01/13

Office of the Director: Knowledge Management and Research
9th Floor, 111 Commissioner Street, Johannesburg, 2001
P.O. Box 7710, Johannesburg, 2000 Tel: (011) 355 0506
Email: David.Makhado@gauteng.gov.za
Website: www.education.gpg.gov.za

Appendix J: GDE Permission letter

1. *The District/Head Office Senior Manager/s concerned must be presented with a copy of this letter that would indicate that the said researcher/s has/have been granted permission from the Gauteng Department of Education to conduct the research study.*
2. *The District/Head Office Senior Manager/s must be approached separately, and in writing, for permission to involve District/Head Office Officials in the project.*
3. *A copy of this letter must be forwarded to the school principal and the chairperson of the School Governing Body (SGB) that would indicate that the researcher/s have been granted permission from the Gauteng Department of Education to conduct the research study.*
4. *A letter / document that outlines the purpose of the research and the anticipated outcomes of such research must be made available to the principals, SGBs and District/Head Office Senior Managers of the schools and districts/offices concerned, respectively.*
5. *The Researcher will make every effort obtain the goodwill and co-operation of all the GDE officials, principals, and chairpersons of the SGBs, teachers and learners involved. Persons who offer their co-operation will not receive additional remuneration from the Department while those that opt not to participate will not be penalised in any way.*
6. *Research may only be conducted after school hours so that the normal school programme is not interrupted. The Principal (if at a school) and/or Director (if at a district/head office) must be consulted about an appropriate time when the researcher/s may carry out their research at the sites that they manage.*
7. *Research may only commence from the second week of February and must be concluded before the beginning of the last quarter of the academic year. If incomplete, an amended Research Approval letter may be requested to conduct research in the following year.*
8. *Items 6 and 7 will not apply to any research effort being undertaken on behalf of the GDE. Such research will have been commissioned and be paid for by the Gauteng Department of Education.*
9. *It is the researcher's responsibility to obtain written parental consent of all learners that are expected to participate in the study.*
10. *The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.*
11. *The names of the GDE officials, schools, principals, parents, teachers and learners that participate in the study may not appear in the research report without the written consent of each of these individuals and/or organisations.*
12. *On completion of the study the researcher/s must supply the Director: Knowledge Management & Research with one Hard Cover bound and an electronic copy of the research.*
13. *The researcher may be expected to provide short presentations on the purpose, findings and recommendations of his/her research to both GDE officials and the schools concerned.*
14. *Should the researcher have been involved with research at a school and/or a district/head office level, the Director concerned must also be supplied with a brief summary of the purpose, findings and recommendations of the research study.*

The Gauteng Department of Education wishes you well in this important undertaking and looks forward to examining the findings of your research study.

Kind regards

.....

Dr David Makhado

Director: Education Research and Knowledge Management

DATE: 2015/01/13

Making education a societal priority

Office of the Director: Knowledge Management and Research

9th Floor, 111 Commissioner Street, Johannesburg, 2001
P.O. Box 7710, Johannesburg, 2000 Tel: (011) 355 0506
Email: David.Makhado@gauteng.gov.za
Website: www.education.gpg.gov.za

753408:LMarx_The_Perceptions_of_OPPs_for_Adolescents_..

ORIGINALITY REPORT

%13	%12	%7	%9
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	Submitted to University of Witwatersrand Student Paper	%1
2	Submitted to University of Glamorgan Student Paper	<%1
3	Submitted to Cranfield University Student Paper	<%1
4	researchonline.jcu.edu.au Internet Source	<%1
5	dro.deakin.edu.au Internet Source	<%1
6	uir.unisa.ac.za Internet Source	<%1
7	aut.researchgateway.ac.nz Internet Source	<%1
8	www.ncbi.nlm.nih.gov Internet Source	<%1
9	www.psychomot.ups-tlse.fr Internet Source	<%1

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