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The perceptions of parents towards the cognitive assessment of their children

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A research report submitted to the Faculty of Humanities, School of Human and Community Development, University of the Witwatersrand, Johannesburg, in partial fulfilment of the requirements of the degree of Master of Education in Educational Psychology by coursework and Research Report.

Johannesburg, February 2020

DECLARATION

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Signature SNeveling Date **16/ 06/ 2020**

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I would like to thank the schools and participants who supported this research through their participation. Their insight will guide psychological practice in this country moving forward.

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ABSTRACT

Cognitive assessment measures, which include intelligence tests, can play a vital role in the identification of learning difficulties in children, as well as subsequent interventions to support these children. However, in South Africa, they are often viewed with apprehension and mistrust; understandable given the country's troubled past and the role of cognitive assessment measures in perpetuating racism and discrimination. In addition, current measures available need to be transformed to make them more applicable and bias-free in this multilingual and multicultural society. Whilst giving preference to the term cognitive assessment measures, rather than cognitive assessments, this study aimed to explore and describe parents' perceptions of cognitive assessment measures; specifically, the administration of these to children. In addition, it aimed to further explore factors which could potentially shape parents' perceptions. Given that parental consent is required in the psychological assessment of children's cognitive functioning, it was deemed important to gain insight into their perceptions and the factors which might make them reluctant to allow their children to undergo these.

A survey-based design was used which included both open and closed-ended questions. The self-designed survey was completed by 40 parents of primary school children and revealed several concerns which parents hold towards the cognitive assessment of their children. It was determined that the participants struggled with the cultural applicability of cognitive assessments, as well as their inherent linguistic bias. Participants also felt that assessments did not provide valid cognitive or academic profiles of children and applied harmful labels to them. Parents' concerns are compounded by a feeling that they are unsupported by schools and practitioners, but they ultimately expect that they would take any course of action if there was a hope that it would be beneficial for their children.

Despite the small sample size, this research offers insight into not only parents' perceptions of cognitive assessments, but also the manner in which practitioners can address some of these concerns to assist parents, and ultimately children who experience difficulties in learning.

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CHAPTER ONE: INTRODUCTION

1.1. Title

The perceptions of parents towards the cognitive assessment of their children.

1.2. Background and Problem Statement

The central focus of this research study fell on an exploration of the perceptions that parents have towards cognitive assessment measures; particularly the assessment of their children through the administration of these measures and the factors which potentially shaped these perceptions. It was postulated that these perceptions could well have come about as a result of cultural, socio-economic, educational and linguistic factors and the incompatibilities that are often observed between South African children, their parents, and the context in which these assessment measures are developed and standardised, as well as the language in which these measures are published and subsequently administered.

In this regard, Cockcroft, Alloway, Copello, and Milligan (2015, p.2) note the problematic practice of administering cognitive assessment measures normed on "monolingual, reasonably affluent, English first language individuals" to South Africans born and raised in a linguistically, socio-economically and culturally diverse context. With factors such as cultural background, socio-economic status, level and quality of education, and language affecting individuals' performance on cognitive assessment measures (Cockcroft et al., 2004; Walker, Batchelor, & Shores, 2009), the concern expressed by Cockcroft et al. (2015) is understandable. Thompson, Bazile, and Akbar (2004) agree and add that psychological assessment measures, which would include cognitive assessments; developed, normed and employed in psychological practice in western society are regularly found wanting when applied to individuals from culturally, linguistically and socio-economically diverse, often non-western backgrounds. Further, through the administration of these measures and tests to contexts diverse from the ones in which they have been normed, racism and discrimination could be perpetuated

(Cockcroft et al., 2015), as was the case during the time of Apartheid in South Africa (Cockcroft & Laher, 2014).

The 2011 National Census (Statistics South Africa, 2012) indicated that only 9.6% of the South African population spoke English as a first language and although significantly increased since 2001, only 40.5% completed secondary schooling, only 46,3% had access to piped water, only 84,7% had access to electricity and only 60% had access to flushing toilets inside their households/dwellings. One can therefore deduce that a sizeable proportion of the South African population is still removed from the more well-heeled, suitably educated, English first language norm groups on which cognitive assessment measures are often normed. This divide led the researcher to propose that a noteworthy part of the South African parent population might hold negative perceptions towards these assessment measures and would subsequently be reluctant to allow their children to be referred for or undergo these.

This assumption was strengthened by Thompson et al. (2004) who noted negative perceptions towards psycho-therapeutic interventions and therapists, with clients not only finding psychotherapy invasive and insensitive, but also therapists unsympathetic and removed from the communities they serve. Psychotherapeutic interventions can be defined as the work done by practitioners in the field of psychology. Although these findings are based on research conducted with 201 African-American participants and the focus falls on psycho-therapeutic interventions, a current lack of recent and similar research in South Africa compels one to hypothesise that the same might apply to South African citizens served by psychologists who are from different socio-cultural backgrounds to their clients, as well as to psychological assessment as a sub-discipline of the broader field of psychology.

In 1996, South African researchers Pillay and Peterson indeed found that therapeutic interventions in general practice were in need of transformation in terms of both demographic representation among practitioners and the execution of practice, which was found to be inherently exclusionary. Although Apartheid had been abolished by then, it was found that the majority of psychologists in South Africa were still white, male and English speaking, with practices largely in urban areas working with largely

white clientele to the detriment of the non-white populace, particularly those who were based in rural areas (Pillay & Peterson, 1996). Resultantly, the field of professionals was limited significantly to the extent that their practice was often found to be inapplicable for the majority of the population (Duncan, Van Niekerk, & Townsend, 2004). For those of the excluded demographic, further problems were found to emerge as a result of language and cultural difference between them and the practitioners, which rendered interventions largely ineffective (Pillay & Peterson, 1996).

As mentioned, more recent South African research on the perceptions of the population towards psychological practice in general and psychological assessments in particular, is lacking. When discussing psychological practice or interventions, we refer to the most common psychological interventions carried out in South Africa include assessments, particularly for school placement and disability grants, and supportive therapy (Petersen, 2004). When taking into consideration that in 2014 only 25% of South African psychologists were Black (Cooper, 2014), the hypothesis that many South Africans may still hold negative perceptions towards psychological practice and assessment is supported to some extent. It can also be argued that with only a minority of psychologists being black, there is limited awareness of this profession among this community and what it entails. This may result in no perception of psychological practice being formed at all (Cooper, 2014). Furthermore Kagee (2014) also mentioned that although South African psychology has come a long way, little progress has been made in advancing the theoretical grounding of African or indigenous psychology, which might make the field more attractive to clients from different cultural, socio-economic, linguistic and educational backgrounds.

Bringing the hypothesis home to the field of psychological assessment, Laher and Cockcroft (2014) mention that psychological assessment in South Africa evokes strong opinions because of its ties with the “indiscriminate, unfair, and biased use of tests” during the Apartheid era. South African researchers Foxcroft, Paterson, Le Roux, and Herbst (2004) also found a lack of trust amongst South African practitioners in the predictive validity of cognitive measures, which are said to be poor indicators of future success. In addition, their research study indicated that South African practitioners expressed a need for more assessment measures that are relevant, appropriately

adapted, standardised and normed for use in a multicultural country with vast differences in terms of socio-economic background, English language proficiency, and educational opportunities. This leads one to consecutively hypothesise that if practitioners are not satisfied with the assessment measures available in South Africa, their ability to appropriately and justly serve this country, and their ability to predict potential and future success; South African parents might indeed hold similar concerns and in turn be reluctant to allow their children to undergo these.

Taking the stated concerns, problems and hypotheses into consideration the aim of this research study was to explore parents' perceptions of cognitive assessment measures; particularly at it pertains to their children being referred for and assessed on these; as well as the potential factors which assisted in shaping these perceptions.

1.3. Rationale

The administration of psychological assessments and more specifically cognitive assessment measures can have a significant impact on the interventions which individuals and schools take regarding individual children (Department of Education, 2001). Education White Paper 6, published in 2001, focussed on the provision of quality education for all children in South Africa, achieved through the establishment of schools for children with mild to moderate educational needs, being Full Service Schools, and schools for children who would require more intensive academic support, being Special Schools as Resource Centres (Department of Education, 2001). In order for children's needs to be identified and specific interventions and placements to be recommended, specific cognitive assessment measures are often administered, which illustrates the serious implications that these measures may have on the future of children to whom they are applied.

Children cannot be assessed without parental consent and the responsibility thus rests on parents to allow their children to be assessed (Psychological Society of South Africa, 2007). Thus, parental perceptions towards cognitive assessment measures in particular and psychological assessments in general, can have important implications for the identification of children's educational needs and the interventions and

placements which are to follow. Hence, as mentioned, the focus of this research study fell on the perceptions which parents have towards cognitive assessment measures.

Cognitive assessments can be broken down, in terms of definition, into an exploration of a subject's cognitive strengths and weaknesses in comparison to established norms (Tatsuoka, 2009). These norms, and the strengths and weaknesses which are investigated, are subjectively established and as noted earlier, can potentially differ from one cultural group to another, with appropriate intellectual functioning being based more on academic and cognitive capacity according to western conceptions and more on communal and practical capabilities by African standards (Cocodia, 2014; Meiring, Van de Vijver, Rothmann, & Barrick, 2005).

Speaking globally, it is found that psychological theories typically used worldwide are based largely on white American samples, thereby neglecting what is estimated to be 95% of the world's population (Arnett, 2008). It is implied, resultantly, that the validity of psychological practice worldwide should be brought into question, with the majority of the world's population being beyond the scope of research in the field (Arnett, 2008). It has already been noted that based on a census done in South Africa (Statistics South Africa, 2012), one could argue that there would be some degree of conflict between the majority of the population of South Africa, which is traditionally African, and the Eurocentric standards of the cognitive assessments which are typically used (Cockcroft & Laher, 2014). It was further hypothesised that this may result in a significant amount of apprehension towards cognitive assessment measures and psychological practice in general with the incompatibility of these assessment measures playing a noteworthy role in the development of these feelings.

Furthermore, when these assessments were applied to African individuals in the past, they typically performed at a much lower level than their white counterparts as a result of the norms applied in evaluating their performance. Wicherts, Dolan, and Van der Maas (2010) found that various western cognitive assessments, including the Wechsler Intelligence Scales for Children and Adults, did indeed determine that the average intelligence quotient for Black South Africans was below the average norm. However, they also discovered that these norms were inaccurate, the tests found to be

biased against African populations, and the African sample on which the assertion of lower intelligence was based; psychically unhealthy which would have negatively impacted their performance. Wicherts et al. (2010) ultimately agreed with the comments of Shuttleworth-Edwards et al. (2004) and Walker et al. (2009) mentioned earlier, by concluding that individuals' performance on cognitive assessment measures are impacted on by a variety of cultural, linguistic, socio-economic, and educational factors.

However, during the years of Apartheid in South Africa, little to no consideration were given to these factors and the results of cognitive assessment measures were often used to justify the political, social, and geographic segregation of races in South Africa (Cockcroft & Laher, 2014). As a result, the use of cognitive assessments in South Africa still raises concern, which may well be due to these assessments and the broader profession having developed a reputation of being instruments of oppression and discrimination in South Africa (Cockcroft & Laher, 2014). This reputation, as discussed earlier, will most likely leave a significant part of the population apprehensive towards cognitive assessment measures and the administration of these to children from diverse backgrounds.

Psychological practice has recently endeavoured to follow a more progressive role in the process of reconstruction and restitution (De La Ray & Ipser, 2004). To this end, there has been an endeavour to diversify psychological theory by promoting the inclusion of non-white practitioners into the profession and shifting the focus of psychological practice and education towards a more Afrocentric emphasis on community and communal interventions (De la Rey & Ipser, 2004). With psychological practice including both supportive therapy and assessments, this shift can be expected to have an influence on both interventions (Petersen, 2004). Whether this progressive shift has resulted in a less apprehensive attitude towards the practice of psychology in general and, in particular, the use of cognitive assessment measures, is the central question of this research study and the matter under exploration.

In contemplating this central question, it was felt that an appropriate starting point for the transformation of individual practice would be for practitioners to explore the perceptions which parents have towards cognitive assessment measures as it is

applied to their children as this exploration may guide practitioners' efforts towards transforming their practice into something more appropriate to the communities in which they work. Furthermore, by exploring parents' perceptions, practitioners may gain more insight into the perceived strengths and limitations of cognitive assessment measures, which in turn can assist them in helping parents to understand these benefits and limitations. This could also help practitioners to empathise with the reluctance parents might have towards having their children assessed. Practitioners may also be better able to help parents to understand the Test developers and those responsible for the adaptation and standardisation of cognitive assessment measures should also be cognizant of these concerns in a context where assessment practices, test development and the standardisation of international measures on the South African population are focussed on addressing the needs of a multicultural and multilingual society.

1.4. Aims

The study, primarily, aimed to explore the perceptions which parents hold towards cognitive assessment measures and their value within the South African context, particularly as it pertains to their children. In addition, it also explored the factors which shaped parents' perceptions of cognitive assessment measures and thus the origins of their perceptions. It did so by not only exploring parents' broad perceptions towards cognitive assessment measures in particular and psychological interventions in general, but also by focussing on any past experiences that parents might have had with psychological interventions and assessments which might have influenced these perceptions.

1.5. Research Questions

The primary question that guided this research study was:

- What are parents' perceptions towards cognitive assessment measures and their value in a South African context?

The study expanded on this question so as to develop a greater understanding of the factors underlying these perceptions and as such, the following questions were also included:

- What factors have played a role in shaping parents' perceptions towards cognitive assessment measures in particular and psychological interventions in general?
- What experiences have parents had with regards to cognitive assessment measures in particular and psychological interventions in general?

1.6. Concept Clarification

1.6.1. Cognitive Assessment

Cognitive assessment measures are used to determine an individual's intellectual performance; based on which predictions for future intellectual achievement are made (Duckworth, Quinn, Lynam, Loeber, & Stouthamer-Loeber, 2011). It refers to the application of a test to an individual with the purpose of establishing that individual's cognitive strengths and weaknesses, in comparison to established norms (Tatsuoka, 2009). Within an education context, this profile of cognitive strengths and weaknesses can be used to plan, implement and evaluate specific interventions for children who experience barriers to learning. Amongst the most used cognitive assessment measures in the South African context, are cognitive assessments such as the Senior South African Intelligence Scale – Revised (SSAIS-R) and the Wechsler Intelligence Scale for Children – Fifth Edition (WISC-V). It can however also include tests which primarily focus on specific cognitive functions such as the Bender Visual- Motor Gestalt Test. In chapter 2 the concepts of intelligence and cognition will be explored in more depth; with some clarification on why this study has opted to give preference to the concept 'cognitive assessment measures'.

1.6.2. Culture

Culture is a complex term describing a community unified by learned traditions and lifestyles. Culture encompasses a shared "knowledge, belief, art, law, morals, custom and any other capabilities and habits acquired by man (humans) as a member of society" (Ardila, 2005, p. 185). Culture ultimately encompasses a shared system of adaptation in terms of responding to one's context (Ardila, 2005), which is significant when it comes to cognitive assessments as adaptation is identified as an indicator of cognitive functioning and performance on cognitive assessment measures, according to the western conception of appropriate intellectual functioning (Cocodia, 2014).

1.6.3. Social Stratification

When exploring a potential socio-cultural impact on the perceptions of cognitive assessment measures, one must consider the impact which socio-economic factors and general access to a variety of resources have. With the impact of socio-economic status, we are referring to the idea of social stratification, which permeates South African society and is a source of a great deal of inequality (Gradín, 2014). Social stratification, particularly in terms of this study, can be defined as a designation of social class based on occupation and income (Seekings, 2003). In terms of the socio-cultural impact on perceptions towards cognitive assessment, where differences in race and culture will be investigated, it is found that white South Africans have a greater average income than their Black counterparts. Black South Africans, according to Lee (2010) earned between 0.4 and 0.6 of the earnings of white South Africans over the period of 1998 to 2006.

1.6.4. Parents

When using the term "parent" in this study, it is a term used according to its definition as established by the South African Schools Act Number 84 of 1996 as it pertains to school learners. A parent can therefore be defined as a biological or adoptive parent or guardian entitled to custody of the child who has undertaken the responsibility of overseeing the education of the child (Republic of South Africa, 1996).

1.7. Theoretical Background

As noted, the central focus of this research study fell on parents' perceptions towards cognitive assessment measures, especially as it pertains to referring their children for, and allowing their children to be assessed on these. In addition, it also looked at the factors which shaped these perceptions. In understanding the relationships between these concepts, the researcher drew on two theoretical models: The General Model of Decision-Making as conceptualised and explained by Lerner, Li, Valdesolo, and Kassam (2015) and the Theory of Planned Behaviour as described by Ajzen (1985). However, before these are discussed in more detail, it is important to understand the relationship between emotions and perceptions, a key component of this study. Through an understanding of this relationship, a clearer grasp of the decision making process can be obtained in terms of the role played by perceptions and the emotions which underlie them.

1.7.1. Emotions and Perceptions

When considering the nature of perceptions regarding cognitive assessments, one must take into consideration the nature of these perceptions relative to the emotions which underlie them. Emotions are defined as the responses which people have to certain experiences. Barclay, Skarlicki, and Pugh (2005) argued that emotions are ultimately socially constructed and play a vital role in determining how individuals engage with experiences, how they think about them and how they behave in relation to them. Outward facing negative emotions include anger and hostility and come about when individuals have negative experiences and attribute the blame for these experiences on others (Barclay et al., 2005).

Tappolet (2012) looked at the manner in which emotions influence perceptions and concluded that emotions and perceptions are intrinsically linked. Emotions and perceptions are linked in the sense that an emotional response to an event is necessarily a value perception of that event. An individual who has a negative emotional response to an event will concurrently perceive these experiences in a negative light (Tappolet, 2012).

1.7.2. Emotions and Decision-Making

Negative emotions around cognitive assessments can lead parents to decide not to have their children assessed. In this regard, Li, Ashkanasy, and Ahlstrom (2014) found that emotions are central to decision-making. Individuals are able to consider past experiences and the emotional outcomes of those experiences which allow them to predict the emotional outcome of a similar experience. A parent who had a difficult experience with cognitive assessments or psychological services in general will be a lot more likely to predict a negative emotional response for their children if they are exposed to such experiences, and subsequently avoid them. Andrade and Ariely (2009) also found that individuals retrieve the emotional outcomes of past experiences when making judgements about future experiences of the same nature. Even after the emotional experience is forgotten, it is found that the individual's past experiences will have an impact on their decision-making for future experiences of the same nature (Andrade & Ariely, 2009).

1.7.3. General Model of Decision-Making

Lerner et al. (2015) discuss a model of decision-making which integrates rational thought with emotional input. An Emotion-Imbued Choice (EIC) model is one which looks at the significance of emotions when making decisions. In the model, emotion influences decision-making in two ways. The first is the individual's predicted emotional response. For parents who had previously had negative experiences with cognitive assessments and psychological services, there is awareness that engaging with the same assessments through their children might cause the same disappointment they themselves experienced. The second role of emotion in decision-making is that of the emotions being felt at the time of the decision (Lerner et al., 2015). For a parent anticipating disappointment when contemplating having their children assessed, their present feeling may be fear or anxiety. This emotion can be expected to have an impact on their decision to move forward with the assessment.

Figure 1 below provides a graphical illustration of the way in which the General Model goes about explaining the process of decision making by building on previous

models and offering its own theories. The General Model builds on the idea that decision making begins with a process of considering the expected outcome of each prospective decision. This, combined with the characteristics of the decision maker as they relate to their perceptions of out outcomes and risk aversion, leads to a process of evaluation and then a decision (Lerner et al., 2015) The General Model adds that emotions play a significant role in this decision making model. Lerner et al. (2015) postulate that decisions are further influenced by present emotions as well as the expected emotional outcomes of the potential decisions. Lerner et al. (2015) also pays credence to the role of otherwise superfluous factors such as the weather and other events that might influence the individual's emotional state at the time of decision making.

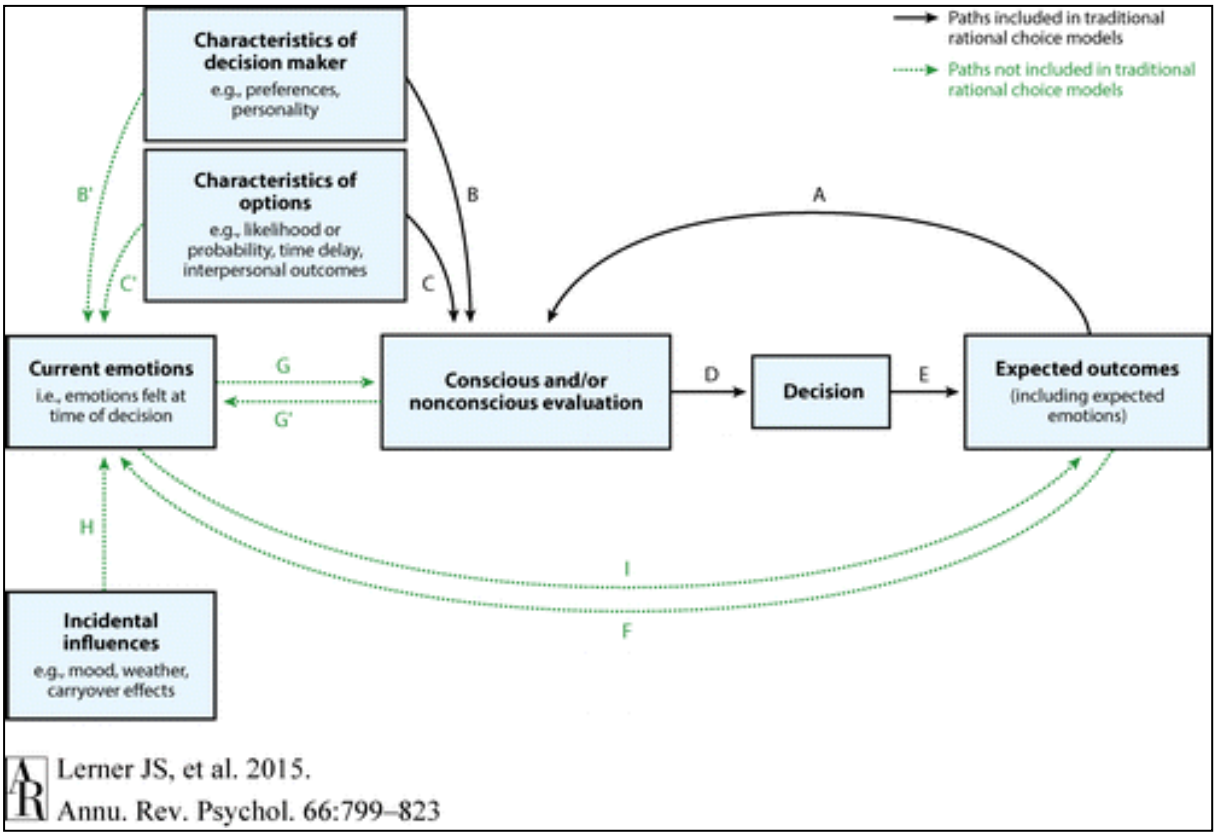


Figure 1. General Model of Decision Making. (Lerner, Li, Valdesolo & Kassam, 2015, pg. 815).

1.7.4. Theory of Planned Behaviour

Another theoretical foundation for the topic regarding perceptions of cognitive assessment is the Theory of Planned Behaviour as postulated by Ajzen (1985), which posits that there is a link between a person's behaviour and perceived behavioural control in terms of access to the resources necessary for the carrying out of the behaviour. The central posit of the theory is that decision making is based on a foundation of intention. Intention refer to the factors which motivate an individual's actions. Intention to carry out an action are influenced by three factors: the individual's attitude towards the action, societal or communal attitudes towards the action and the extent to which the individual perceives him/herself to be in control over the action (Ajzen, 1991). Perceived behavioural control refers to the extent to which an individual feels that he/she is able to carry out the action (Ajzen, 1991). Individuals need to perceive themselves as having the resources necessary to carry out a certain behaviour. The greater the access individuals believe they have to these resources, the greater their self-perception of behavioural control that they will have and the more likely it is that they will engage in that behaviour (Ajzen, 1985).

The Theory of Planned Behaviour is significant in terms of understanding parents' perceptions around cognitive assessment measures and how these perceptions have come about. This link is centred largely around the factors of an individual's attitude towards an action as well as their perceptions of behaviour control as espoused by Ajzen (1991). Parents may have a positive or negative attitude towards the action of having their children assessed. When thinking of the South African context and the extent to which many South Africans feel they are able to access psychological services (Pillay & Petersen, 1996), it would be important to see these attitudes as having been impacted on by their perceived behavioural control (Ajzen, 1985). For the purposes of this study we can consider the issue of access to resources on a practical level by focussing on the financial difficulties many South African parents experience, which limits their access to resources such as psychological assessments and psychological interventions (Hoogeveen & Ozler, 2005). However, access to resources can potentially also be considered as one's ability to comprehend and thereby appropriately access the

cultural and linguistic media used in cognitive assessment measures which have been developed and standardised internationally.

1.7.5. Bioecological Model

When considering the South African context as a significant factor in considering the role which cognitive assessments play in society (Ajzen, 1991; Pillay & Petersen, 1996), one could find use in the Bioecological Model of human development as espoused by Urie Bronfenbrenner. Bronfenbrenner and Morris (2007) define human development as being the result of objective experiences and interactions and the subjective perceptions of these experiences. These experiences, according to the Bioecological model, are largely made up of personal and environmental influences which play on the individual. These influences can be subdivided into the characteristics of the person, their environment, the relationship between the person and their environment and the impact of time (Krebs, 2009a).

Broadly speaking, the relationship between the individual and their environment is particularly pertinent to this study as we consider its background and rationale. These sections describe a sociocultural environment which may have a negative impact on the perceptions which South Africans have regarding cognitive assessments in particular and psychological services in general (Cockcroft & Laher, 2014; Pillay & Petersen, 1996). The Bioecological model would describe the South African context as having a macrosystemic influence on parents in terms of the development of their perceptions around cognitive assessment measures (Krebs, 2009a).

1.8. Overview of Research Report

The report will proceed from the introduction to the literature review, where a number of concepts and arguments around the topic of cognitive assessments in a multicultural society will be discussed. The literature review will be followed by a discussion of the methodology of the topic. The chapter on methodology will begin with an outline of the design of the study and the instrument from a practical perspective as

well as a theoretical one, which will allow for the appropriateness of the design and the instrument to be considered in relation to the nature of the study. The chapter on methodology will conclude with an exploration of the procedure which was followed in the research and the ethical considerations which were taken into account. Following this chapter will be a discussion of the results. This chapter involves a summary of the process used to generate codes and themes from the results along with an overview of these themes from the perspectives of the participants. The next chapter involves a conclusion section where the themes are re-explored from the perspective of other researchers and in relation to the aims of the study, the research questions, and the theoretical framework. This final chapter also offers a conclusion of the study in terms of the strengths and weaknesses of its procedure and methodology and the value of its results.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

Within the scope of a research study that focusses on parents' perceptions of cognitive assessment measures and the administration of these to their children, it would be important to first explore the concepts cognition and intelligence further. While doing so, one needs to take cognizance of the fact that difficulties in defining these concepts, as well as the role of culture in doing so can potentially contribute to feelings of apprehension amongst parents about allowing their children to be assessed on these measures. In relation to the differences in cultural conceptualisations of appropriate intellectual functioning, the next portion of the literature review focusses on the potential impact of cultural bias on parents' perceptions of cognitive assessment measures. Thereafter, the literature review further hypothesises on the various factors which might influence the perceptions which parents have regarding cognitive assessment measures. To this end, the issues around language are explored, in terms of the differences in linguistic background between assessments and the population under investigation. The validity of cognitive assessments will also be explored in terms of their ability to form an accurate profile of an individual and predict future achievement. The nature of psychotherapeutic practice in South Africa will be discussed with reference to both modern times and the Apartheid era. During the Apartheid era, psychology was used to justify discrimination and segregation and struggles to engage with the African population in modern times. Finally, the literature review will explore the value of cognitive assessments in terms of supporting children along with a discussion around the way in which psychological practice in South Africa intends to move forward to meet the demands of the diverse South African society. In this regard, the literature review will conclude with a discussion of the potential value of cognitive assessments and the role which these measures can play, alongside inclusive education, to support learners with special education needs.

2.2. Understanding Cognition and Intelligence

2.2.1. The Contributions of Spearman and Cattell-Horn-Carroll in Understanding Cognition and Intelligence

Gottfredson (1997, p.13) writes:

> *[Intelligence]...involves the ability to reason, plan, solve problems, think abstractly, comprehend complex ideas, learn quickly and learn from experience. It is not merely book learning, a narrow academic skill, or test-taking smarts. Rather is reflects a broader and deeper capability for comprehending our surroundings – "catching on," "making sense" of things, or "figuring out" what to do.*

Although this is one of the most widely accepted definitions of intelligence and captures at the very least the concepts of crystallised and fluid intelligence (see below for further discussion), it is certainly not the only definition arising from over a century of research on the matter; a factor which can potentially influence people's perceptions of cognitive assessment measures.

According to Amod (2013b) and Ford (2004) it has been remarkably difficult to define the concept of intelligence, with various formulations being developed by each new theorist who covers the concept (Croker, 2012). As noted, these difficulties can potentially impact people's perceptions of cognitive assessment measures (Cockcroft & Laher, 2014) and contribute to Nisbett et al's. (2012, p. 130) view that, "*The measurement of intelligence is one of psychology's greatest achievements and one of its most controversial.*" Thus, it is worth exploring in more depth whilst creating an understanding of the primary concepts under review: intelligence and cognition.

In exploring the concepts of intelligence and cognition, attention is drawn to Charles Spearman, who developed one of the earliest theories on intelligence and cognition in the first part of the 20th century. Spearman considered intelligence in terms of two factors: a general underlying cognitive factor which influences a person's functioning across a wide variety of tasks and situations (the *g*-factor), and a

combination of specific factors (the *s*- factors), each of which influences a person's performance on specific tasks (Sternberg, Kaufman, & Grigorenko, 2008). Later theories of intelligence included those proposed by Thurstone in the 1930's who, it must be mentioned, actually rejected the presence of a *g*- factor (Cocodia, 2014), and Guilford in the latter half of the 20th century. Thurstone in particular viewed intelligence in terms of seven primary mental abilities; including "verbal comprehension, quantitative ability, memory, perceptual speed, space, verbal fluency, and inductive reasoning" (Sternberg et al., 2008, p. 13). Guilford built on the work done by Thurstone by not only extending the seven primary mental abilities to 120, but also by indicating that all mental tasks include three elements, referred to as content, product, and operation.

Just as Guilford build on the work of Thurstone, Cattell and Horn build on Spearman's conceptualisation of intelligence by initially viewing it as consisting of two types of intelligence: *crystallised* and *fluid*. Whereas the former focusses on the aspects of intelligence that relates to what people have learned through formal and informal learning experiences, the latter focusses more on problem-solving and decision making, and a person's ability to solve new and unusual problems which they have not necessarily encountered before (Floyd, Bergeron, McCormack, Anderson, & Hargrove-Owens, 2005; Sternberg et al., 2008). In later years Horn extended on these two types of intelligence by including other abilities such as visualisation, short- and long-term memory and processing speed. Then, in more recent years, the hierarchical model of John Carroll, which viewed intelligence in terms of general, broad, and narrow abilities, was combined with the theory of Cattell-Horn. This gave rise to the development of the Cattell-Horn-Carroll (CHC) theory with a focus on cognitive functioning divided into three strata, all representing different cognitive abilities (Floyd et al., 2005; Sternberg et al., 2008).

CHC theory postulates that a person's cognitive functioning can be divided into three strata. Stratum III reflects Spearman's *g*-factor, which is broken down into 16 broad abilities (Stratum II) and more than 80 narrow abilities (Stratum I) (Flanagan & Dixon, 2013; Kan, Kievit, Dolan, & Van der Maas, 2011). Thus, CHC theory is one of general cognitive functioning being an aggregate of various underlying cognitive

abilities (Kan et al., 2011) and thus understands intelligence in terms of a person's cognitive abilities.

According to Floyd et al. (2005), the original building blocks of CHC theory are seen by many "as the most complete and empirically supported descriptions of the structure of human cognitive abilities" (pp. 329-330), which makes this one of the most prominent theories in the development and interpretation of more recent cognitive assessment measures. Breaux et al. (2017) adds that it is often applied in developing a pattern of strengths and weaknesses for children, which in turn forms a vital component of intervention programmes for children who experience difficulties in learning. As a result, many recently published cognitive assessment measures, including the Wechsler Intelligence Scale for Children – Fifth Edition (WISC-V) and the Kaufman Assessment Battery for Children – Second Edition (KABC-II) are based on this theory. However, this has not always been the case and in the past, cognitive assessment measures were widely criticised and mistrusted for their over- reliance on Spearman's *g*-factor and their conceptualisation of intellectual functioning as a single underlying general intelligence factor (Huang, Bardos, & D'Amato, 2010). In earlier years, and even in more recent publications (Floyd et al., 2005; Newman, 2008), the existence and importance of a *g*-factor, in other words a general intelligence or general underlying cognitive ability, has been questioned and criticised. In this regard, Newman (2008) states that it is the overemphasis of a *g*-factor in earlier measures of cognitive functioning, that has led to a lot of criticism against the use of these measures.

Amod (2013b) adds that cognitive assessment measures developed in the earlier part of the 20th century were criticised for their "narrow and outmoded conceptualisation of intelligence as a general intellectual construct ('*g*') which is fixed and immutable" (p. 104). It is based on this conceptualisation that the Stanford-Binet Scale was developed, which introduced the concept of an intelligence quotient score, popularly known as a person's IQ score (Foxcroft & Davies, 2008). This IQ score essentially represented a person's general, underlying cognitive ability and thus their functioning across a wide variety of tasks. Moreover, as noted by Amod (2013b) and Cocodia (2014) it was considered fixed and immutable.

With reference to the latter, Cocodia (2014) writes that these conceptualisations, at least in part, can be traced back to Charles Spearman and his understanding of the *g*-factor as a biological factor, or a component of the brain, that influences a child's scholastic performance as much as it influences workplace accomplishments and general everyday functioning. By conceptualising or defining intellectual functioning as a single, underlying biological factor, one assumes by implication that the difficulties children for instance experience at school are inherent to them. Further, it does not take into consideration the impact of external factors, such as quality of education and socio-economic status, on a particular child's performance, not only on a certain cognitive assessment measure, but also in daily life. This view can be considered "overly reductionistic and misleading" (Fiorello et al., 2007, p.4) and appears to fit the so-called medical or child-deficit model, rather than a socio-ecological or systemic model (Nel, Nel, & Hugo, 2013).

Within the medical model, the difficulties experienced by school children, were thought to exist within the child, which led these children to be labelled as "dunce", "stupid", "depraved" and "incorrigible". These labels indicated that learners who struggled in school were not supported, but seen as biologically defective, with the last label suggesting that these children were seen as being beyond the assistance of the school system (Deschenes, Cuban, & Tyack, 2001). Within the context of early cognitive assessment, the same system of labelling over support was implemented, with children scoring poorly on standardised tests being marginalised and alienated, separated from those learners deemed 'normal' (Deschenes et al., 2001).

> *In practice, testing was used not so much to diagnose specific learning problems and to devise appropriate learning strategies (surely valuable uses of the new technology of assessment) as to isolate the ne'er-do-wells from the mainstream of the graded school for the normal students* (Deschenes et al., 2001, p. 532).

Stobart (2008) found that assessments have an interesting yet unwanted side effect of creating new, otherwise non-existent people. The philosophy here is that the outcome of these assessments results in labelling which establishes an identity for individuals which they did not have beforehand. As examples, an individual can be

diagnosed and labelled as being intellectually disabled, dyslexic, or hyperactive or can be said to struggle with attention- deficit. These labels then lead to a number of assumptions about how that individual can be expected to behave and perform in an academic and occupational environment (Stobart, 2008). Boyle (2014) argues the utility of labelling in special needs education in terms of being able to provide appropriate services to children with specific needs and to inform appropriate teaching practice. However, Boyle also discusses labelling, regardless of practicality, as being an exclusionary practice, which results in learners being removed from mainstream school environments.

This leads to a second concern regarding the incorporation of the *g*-factor in test development and interpretation; the use of for instance global composite scores (such as the Full-Scale IQ score [FSIQ]) in making diagnosis and planning interventions. Toffalini, Giofrè, and Cornoldi (2017) state that a profile of strengths and weaknesses cannot be formulated based on a single, unitary construct of intelligence, in other words, a single, global test score. Researchers such as Fiorello et al. (2007) caution practitioners, even today, against the interpretation and use of the FSIQ for clinical, diagnostic, and intervention purposes. These cautionary words not only stem from the research that was done by Fiorello et al. (2007), but also from more than a century of cognitive assessment measures being criticised for their over-reliance on *g* and the limited support this has given to children with learning difficulties. For instance, Amod (2013b) and Huang et al. (2010) indicate that the previous over-emphasis on global scores left many children diagnosed, but without appropriate interventions to assist them.

Croker (2012) and Wechsler (2003), who actually states that the existence of an underlying cognitive factor cannot be denied, add that an over-emphasis on a single, underlying cognitive construct left a lot of earlier measures of intellectual functioning wanting, as they focussed on differentiating between individuals based on specific scores, rather than on assisting and appropriately supporting people. Thus, the main concern appears to be with the over-emphasis on the presence of a *g*-factor with Compton, Fuchs, Fuchs, Lambert, and Hamlett (2012) stating that the interpretation of global scores alone do not provide practitioners with information regarding a particular

child's cognitive strengths and weaknesses, which is regarded as essential in the identification of learning difficulties and in planning interventions. Therefore, in addition to leaving children labelled, alienated, and marginalised, traditional measures of cognitive and intellectual functioning were also widely criticised for their inability to support appropriate interventions for children with learning difficulties and barriers to learning (Amod & Seabi, 2013).

As mentioned earlier, CHC theory proposes a shift from traditional views of intelligence as single underlying intellectual ability, to viewing it more in terms of specific cognitive abilities that contribute to various aspects of academic and scholastic functioning and, as such, is useful in determining a profile of strengths and weaknesses that can be used in the development and evaluation of intervention programmes for children who experience difficulties with learning. However, whether this has created a more positive perception towards cognitive assessment measures remains to be seen.

Another theory which focusses on a person's cognitive abilities and more specifically the manner, in which they process information, is the Planning, Attention, Simultaneous and Successive (PASS) cognitive processing model.

2.2.2. The Contributions of PASS Theory in Understanding Cognition and Intelligence

With the rise of the cognitive revolution (Amod, 2013b; Fagan & Holland, 2007), and with that changes in international educational legislation, practitioners were compelled to no longer use the results of cognitive assessment measures to classify and label children, but rather to develop individual intervention programmes to support children with learning difficulties. It is in this context that PASS theory gained more prominence.

Although CHC theory can be viewed as a psychometric theory with an emphasis on structural models and exploratory and confirmatory factor analyses (Schneider & McGrew, 2012), PASS theory is considered more of a cognitive or information

processing model based on the work done by AR Luria, a Russian neuropsychologist (Sternberg et al., 2008). According to PASS theory, there are four cognitive processes which form the basis of human cognitive functioning and information processing: Planning, Attention, Successive Processing and Simultaneous Processing (Naglieri, 1999). Planning is described as a cognitive process related to executive functioning which assists individuals in appropriately making decisions and solving problems by choosing, implementing, and evaluating solutions. Executive functions are cognitive processes responsible for controlling basic cognitions such as reasoning and decision-making (Engelhardt et al., 2016) and involves important cognitive functions such as working memory. Naglieri and Das (2005) add that it becomes noticeable when the individual is expected to solve a problem by analysing the task, finding an appropriate way to solve it, evaluating the chosen solution, and adjusting the solution if needed. Amod (2013b) also notes that it involves impulse control and the ability to regulate one's actions.

Although attention is a well-known concept often referred to in educational settings, within the context of PASS theory it relates to a person's ability to focus, ignore distractions, and sustain the focus until a task has been completed. In this regard, it includes focussed attention, sustained attention, and selective attention. Whereas focussed attention involves directed concentration to particular stimuli, selective attention involves the inhibition of interfering stimuli and sustained attention the person's ability to remain focussed, depending on the effort required by a particular task (Naglieri, 1999).

The last two components of PASS theory, simultaneous and successive processing, focus on the way an individual either processes information in a particular sequence or serial order, whilst paying attention to detail and the temporal and linear relationships between stimuli (successive processing) (Kaufman & Kaufman, 2004), or find meaning in the information being processed by grouping stimuli together and focussing on the inter- relationship between these (simultaneous processing) (Amod, 2013b).

The importance of the cognitive processes described by PASS theory in daily cognitive functioning and performance on a number of cognitive assessment measures has been well-established in literature. For instance, research conducted with the Wechsler Abbreviated Scale of Intelligence - 2nd Edition (WASI-II), published in 2011, found that individuals with strongly developed planning, attention, simultaneous and successive processing skills can be expected to score higher on measures of cognitive functioning and giftedness (Abougoush, 2014). Engelhardt et al. (2016) found that there is a very strong link between executive functioning and intelligence. Similarly, Duan, Wei, Wang, and Shi (2010) explored the link between executive functioning and intelligence in 11 to 12-year-old children. Children were measured on cognitive tasks measuring cognitive functions with their scores on these tests being compared with those on the Raven's Advanced Progressive Measures (RAPM) and found that there was a very high overlap between executive functions and intelligence (Duan et al., 2010). Another study conducted by Shelton, Elliott, Matthews, Hill, and Gouvier (2010) on the relationship between fluid intelligence and cognitive processes and working memory, secondary memory and processing speed found that there was a significant correlation between these phenomena. Giofrè, Mammarella, and Cornoldi (2013) confirmed that working memory does indeed predict intellectual functioning. The conclusion is therefore that intact and efficient cognitive processes are essential to the ability to adapt to everyday situations (Shelton et al., 2010).

Returning to the prominence of PASS theory, it has been included in the development and interpretation of amongst other measures, the KABC-II, as well as the Cognitive Assessment System (CAS). Moreover, it has been lauded for its important role in the assessment and identification of children with learning difficulties. Taking reading as an example, which is reliant on a child's ability to decode text and comprehend what is read; attention and working memory assists in retaining information and making meaning of what is read, successive processing plays an important role in phonologically decoding unfamiliar words, and simultaneous processing is important in the visual recognition of familiar words and sight word reading (Amod, 2013b; Naglieri & Das, 2005). When reading texts aloud, successive processing, as well as planning is involved in the pronunciation of words as the child is not only expected to organise the

speed sounds in a particular order so that they relate to the written word, but also to plan speed output (Naglieri & Das, 2005). In addition, as early as 1994 Das, Naglieri, and Kirby recognised the importance of PASS theory in planning interventions for children with specific learning difficulties; a viewpoint supported by Amod (2013b).

Thus, in addressing earlier concerns about an over-emphasis on Spearman's *g*-factor and its relationship to labelling, categorising, and excluding children, leaving them without appropriate intervention strategies to address learning difficulties; PASS and CHC theory raised awareness of viewing and conceptualising intelligence as not only a broad underlying intellectual factor, but as a multitude of cognitive abilities and processes which contribute to academic and everyday functioning. With this in mind, authors such as Sotelo-Dynega and Dixon (2014) endorse the use of the concept cognitive assessment over intelligence testing; hence, the preference given to this term in this study. However, they do stress that in order for practitioners to add value through the cognitive assessments which they administer and interpret, it is vitally important that they understand important theoretical developments such as PASS and CHC theory. Moreover, the onus rests on practitioners to apply these theories in the interpretation of cognitive assessment measures, in establishing individual patterns of cognitive strengths and weaknesses and, based on these, in designing, implementing, and evaluating intervention programmes for children who experience difficulties in learning.

With no published research findings available, it is difficult to determine how many South African practitioners have made this shift and are incorporating more recent theory of cognitive functioning and processing in the interpretation of the cognitive assessment measures they administer. It is further difficult to say whether the shift from an over-reliance on the *g*-factor, to the application of theories such as CHC and PASS in interpreting cognitive assessment measures, has left people feeling less critical of these. Regardless, what is known is that it is not only different theoretical orientations that impact on the manner in which we understand cognition and intelligence; cultural conceptions also play a critical role and may impact parents' perceptions of cognitive assessment measures.

2.2.3. The Contributions of Culture in Understanding Cognition and Intelligence

Over the years, much has been written on not only the impact of culture on children's scores when assessed on cognitive assessment measures, but also the influence of culture on the conceptualisation of specifically intelligence (Furnham, 2001; Sternberg, 2004).

Beyond diversity in conceptualising intelligence between theorists, intelligence is understood in diverse ways globally (Sternberg, 2004). This global diversity can be linked to the idea of intelligence as a cultural conception. Each culture will understand and assess intelligence in different ways, based on their environment and social structure. Where intelligence may be linked to scholastic achievement in industrialised societies, a society without an equivalent school system might be understood in a different way (Sternberg, 2004). Furnham (2001) also found intelligence and intelligent behaviour to be heavily rooted in both a cultural and a temporal context, with conceptions of intelligence to be very fluid from culture to culture and within cultures, from one time period to another. Returning to the earlier definition of intelligence provided by Gottfredson (1997), it was said that amongst other abilities, intelligence allows humans to understand and comprehend their environments and to appropriately function within these. Sternberg (2013) argued that intelligence is indeed related to one's environmental context along with a person's ability to adapt to environmental demands and constraints. Amongst other metaphors, Sternberg (2013) proposed a metaphor of evolution in defining and understanding the concept of intelligence and noted that intelligence reflects the ability of a human to adapt to and survive in a given environment. In addition, Sternberg (2012) also argued that intelligence is related more closely with adaptation in relation to personal goals. According to Sternberg's Success Theory of Intelligence, intelligent behaviour is that which allows an individual to effectively adapt to their environment, select it and shape it as a means to achieve individual or societal goals (Sternberg, 2012).

Whilst taking cognizance of the above, it is important to note that Sternberg (1997) made a distinction between intelligent behaviour and tested intelligence which is very significant as it is this distinction, or rather the failure to make this distinction

that has contributed to the psychological marginalisation of the non-white community in South Africa; a concern which will likely negatively impact on parents' perceptions of cognitive assessment measures. Although there appears to be a consistent focus on learning intelligent behaviour amongst different socio-cultural groups, behaviour that will assist individuals to adapt to and survive in specific contexts, the conception of what constitutes intelligent behaviour differs amongst diverse socio-cultural groups (Sternberg, 1997).

The ideal would be to establish a universal definition of intelligence which employs the environmental aspect of Robert Sternberg's definition (1997) and regards intelligence as being the ability to succeed or achieve one's goals regardless of the constraints placed on the individual by the environment (Legg & Hutter, 2007). Legg and Veness (2013) offer a universal, if informal, definition of intelligence as being *"... an agent's ability to achieve goals in a wide range of environments" (p. 2).*

A universal definitional of intelligence is, however, seemingly difficult to attain when one takes into consideration the differences in defining intelligence amongst different cultures. Sternberg and Grogorenko (2006) thus opted for a description of successful intelligence:

"Successful intelligence is the ability to achieve what one seeks in life, within one's sociocultural context, through a combination of adapting to, shaping, and selecting environments, by a mix of analytical, creative, and practical abilities. Successful intelligence is relevant across cultures because in any cultural environment one has to figure out to adapt, shape (or select out), and figure out how to achieve one's goals within the sociocultural context. Successful intelligence is typically defined within a culture." (p. 28)

2.2.3.1. Western Conceptualisation of Intelligence and Cognition

The Western conception of intelligence is based around the perceived importance of science and technology in western society, and as such, the ability to adapt and the significance of problem-solving skills are considered noteworthy

indicators of intelligence in such societies (Cocodia, 2014). Further studies on western conceptions of intelligence determined that these problem-solving and decision-making abilities are accompanied by an awareness of and interest in the world and cognitive ability. Ultimately, the western conception of intelligence is based on academic ability (Cocodia, 2014). What is also central to the Western conception of intelligence is the idea of independence and the ability to succeed as an individual. The traits associated with independence and individuality are those associated with curiosity and the assertiveness associated with goal directedness. These traits are therefore associated with intelligent individuals from a Western framework. More outward indicators of independence, and therefore intelligence, from this framework would be financial and employment status and level of education (Greenfield & Suzuki, 2006).

2.2.3.2. African Conceptualisation of Intelligence and Cognition

Grigorenko et al. (2001) conducted a study of the Luo people in Kenya where they explored the conception of intelligence in that community. It was determined that this community has a conception of intelligence which is comprised of four components covering learned skills, social abilities, problem-solving capabilities, and the ability to understand and comprehend. The study ultimately explored the diversity which is inherent in cultural perceptions of intelligence and introduced a conception of intelligence which is inherently African (Grigorenko et al., 2001). This definition contrasts with one of Western origin which conceptualises intelligence as being based on one's verbal comprehension and processing speed skills (Wilson & Mujtaba, 2008). This diversity in conception is very evident also amongst the population of South Africa, where there are found to be cultural differences when it comes to forming and defining cognition, specifically intelligence. Along with this, there are also differences in the way in which these attributes can and should be explored in individuals (Cocodia, 2014).

These cultural differences are centred, ultimately, around the idea that while the western populace values individuality, the African populace gives more credence to the importance of community and while traditionally European South Africans identify academic success as an indicator of intelligence, the traditionally African populace view

practical ability, such as skills related to household and everyday tasks, as an indication of an individual's intelligence (Cocodia, 2014). This tie in with the Kenyan conception discussed by Grigorenko et al. (2001) who found that Kenyans also appreciate practical ability as an indication of intelligence in the form of problem-solving abilities. This indicates something of a shared understanding of intelligence between the two African communities with regards to practical abilities.

Another overarching theme which covers most African conceptions of intelligence and this is social competence (Cocodia, 2014). Social competence is central to development and intelligence in African cultures and this can be seen from early childrearing practices in these communities. African parents will habitually deploy their children into neighbourhood settings with tasks requiring them to engage with others in their community. This deployment allows children to both support their neighbours and learn from them (Nsamenang, 2006).

This idea was confirmed by research conducted by Serpell (2011) where it was found that social expectations of intelligence was seen as a balance between social competence and intellectual readiness. Most African communities measure intelligence according to practical skills as opposed to academic skills and social responsibility, which is seen as interwoven with intellectual ability (Cocodia, 2014).

Within the notion of considering African cultures as being more community centered, Volkman (2013) writes that within more interdependent cultures, there is reliance on what is referred to as collective intelligence. Collective intelligence is based on the interactions between individuals allowing for greater ingenuity and advancement (Volkman, 2013).

Woolley, Chabris, Pentland, Hashmi, and Malone (2010) define collective intelligence as being the ability to collaborate as a part of a group and perform effectively and productively on a variety of challenges. Collectivism also has an impact on the cognitive process of learning. Collective learning is that based around social learning and collaboration (Fadul, 2009).

Thus, in numerous African societies, one could argue, an individual might be found to be very capable in a cognitive sense but will only be considered intelligent if they are found to also possess a strong degree of social competence. These conceptions were not found to be limited to communities in Africa; however, as research conducted with a middle-class sample in the United States found that much of the population considered social competence to be a very important indicator of intelligence. This view was contradictory to those held by experts investigated in the same research (Serpell & Haynes, 2004). In light of this research, one can conclude that there is diversity, even within what one might call a national culture, when it comes to the conceptualisation of intelligence (Serpell & Haynes, 2004). This makes it particularly difficult to standardise and norm cognitive assessment measures for a specific population.

2.3. Difficulties Related to Cultural Bias in Testing

It is not only differences in definitions of intelligence that can negatively impact parents' perceptions of cognitive assessment measures. It is also the manner in which a person's context can negatively impact their performance on these measures. Much controversy has existed over the nature of cognitive assessment measures and specifically their focus on the assessment of verbal skills. Ford (2004) discussed a number of concerns around cognitive assessments, particularly those related to the efficacy of these in diverse contexts. One of these concerns relate back to the focus of earlier measures of intelligence on crystallised reasoning which, as was mentioned earlier, is the knowledge and information that people have obtained through formal and informal learning experiences within particular contexts. Crystallised intelligence, which includes language development, is thus culture and context bound.

In this regard, Mitchell et al. (2017) raise concerns about the use of the Senior South African Individual Scale – Revised (SSAIS-R) for instance which, although South African, has a much greater emphasis on the assessment of children's verbal skills, as opposed to their non-verbal skills. Given the interrelationship between a child's educational background and the context in which they are developing, and the development of their linguistic skills, this test can be considered biased. Amod (2013b) adds that in the past, traditional measures of intelligence were indeed criticised widely

for their over-reliance on verbal skills and in essence acquired knowledge. Naglieri and Kaufman (2001) agree that the verbal subtests, which dominated traditional tests of intelligence, were largely based on educational opportunities, cultural exposure and learned knowledge; all of which make the application of these tests to children from diverse backgrounds inherently biased.

The ideal would be to develop and standardise tests that are culturally and linguistically valid and reliable for use on multicultural settings; however, Laher and Cockcroft (2017) discuss some of the complexities in attaining this goal. These authors mention that test development and standardisation are incredibly expensive, time consuming and "requires specialised psychometric skills" (p.115); all factors which inhibit the development of locally normed and developed tests. As a result, most assessment measures currently used within the South African context have been internationally developed, standardised and normed, and where possible adapted for the South African contexts; however, these adaptations are also expensive and time-consuming. This leaves psychometric assessment in South Africa, which includes cognitive assessment measures, compromised by resource- constraints (Laher & Cockcroft, 2017). Matters are complicated when taking into consideration the comments made by Kaufman (2015) who mentions that specific subtests can measure different cognitive constructs when administered to individuals from different cultural backgrounds. This author used vocabulary subtests (which appear on a number of cognitive assessment measures in some form or another) as an example and mentioned that in the United States, vocabulary subtests might measure lexical knowledge and development in Caucasians, but in American citizens from a different cultural background, it might in fact be measuring exposure to dominant American culture. These differences can make cognitive assessment measures inherently biased and is something to take into consideration when international measures are used in a South African context.

There have been numerous attempts, even during the Apartheid era, to investigate the differences between South African cultures in terms of performance on cognitive assessment measures. These investigations have concluded that there is a significant problem with structural equivalence in the tests used as there was a

noticeable bias towards English speakers in the tests used (Meiring et al., 2005). This linguistic bias makes a fair comparison between these groups difficult if not impossible, as they instead identified the strong impact of both language skills and education levels on the results of such tests. The tests used to make these comparisons included the Senior Aptitude Test, Mechanical Insight Test, and the Scholastic Proficiency Battery (Meiring et al., 2005). To complicate matters further, Shuttleworth-Edwards (2017) writes that in a multicultural and multilingual country such as South Africa, where diversity is evident not just based on culture and language, but also in terms of other factors socio-economic status, educational opportunities, and access to health care services; it is actually impossible to establish norms for cognitive assessment measures that would not be biased. She cites Sucky (2016) in saying that population norms are only valid in countries where people speak a single language and are exposed to the same educational opportunities, which is becoming less likely in a globalised world. Thus, the norming and standardisation of international assessment measures for the South African population are problematic; not just because it is resource-intensive but, in actual fact, it is simply obsolete (Shuttleworth-Edwards, 2017).

Michael Cole (2009) adds that the development of culture-free assessment measures is inherently impossible due to the undeniable influence of the background of the test developer. The subtests of a cognitive assessment would invariably include activities or skills which are pertinent in the culture of its developers. This is due, according to Cole (2009), to the fact that the tests would most likely have been standardised against a sample comprising those of the developer's culture.

Serpell and Haynes (2004) offer an alternative solution, involving the development of a "school culture" specific to a particular body of learners who would therefore share a set of core educational values, thereby allowing for the standardisation of norms while mitigating the impact of differing norms as a nuisance variable. The concerns raised can negatively impact parents from diverse cultural backgrounds as the use of culturally biased tests can lead not only to inaccurate diagnosis and interventions, but as mentioned in chapter 1, can also perpetuate racism and discrimination (Cockcroft et al., 2015).

The following section will look at other factors which can potentially negatively impact on parents' perceptions of cognitive assessment measures.

2.4. Additional Factors Potentially Influencing Parents' Perceptions

With the concepts of intelligence and cognition having been explored in more depth, we must hypothesise on how these concepts and philosophies might be viewed by the South African population. In this regard the following sections will focus on the historical role which psychological practices and testing played during the Apartheid years, more pressing issues around psychological practice in the South African context and then continued issues around language and concerns regarding the validity and reliability of cognitive assessments.

2.4.1. Psychological Practice in South Africa during Apartheid

Psychological practice was introduced to South Africa from a western framework, based largely on the theories espoused by American philosophers, no later than its introduction in the west. The framework was introduced to a society with a demographic situation significantly different from those countries where these theories originated. It has been shown through a variety of studies that western psychological theory and practice is not entirely compatible with the culture of non-white South Africans in terms of socio-cultural issues and the conception of intelligence (Cocodia, 2014; Meiring et al., 2005). The practice of psychology in South Africa played a significant role in justifying segregation by for instance employing biased and incompatible cognitive assessment measures when assessing black South Africans and thereafter postulating that this population is inherently different, if not inferior, in terms of cognition (Blanche & Painter, 2004).

In practice, the system of Apartheid was justified, on a psychological level, by the idea of pathology, which dominated psychological practice at that point (Naidoo, 1996). The varying forms of segregation applied to South African society at that point were justified by the results of varying culturally biased cognitive assessment measures (Burke, 2006). The Bantu Education Act was introduced on the back of the conclusions

of these measures, which pointed to the idea of black South Africans as being cognitively and culturally inferior to their white counterparts. This form of education provided for black South Africans had a significant societal impact on this population, particularly in terms of their employment opportunities, which were limited to unskilled labour as a result (Burke, 2006). Burke (2010) argued that the conclusions around the inferiority of the black population were due to the use of psychometric tests developed by western practitioners and normed on a white sample.

In addition to the use of biased assessments (Burke, 2010), black South Africans began to be viewed according to three social models which were used to further entrench the idea of their inferiority. These included the genetic inferiority model, which postulated that black South Africans presented as lower on the evolutionary scale than white South Africans; the genetic deficiency model, which contended that inferiority formed a part of the genetic or biological makeup of black South Africans; and finally the culturally deprived model, which argued that the non-western environment and context resulted in the black populace developing a culture that was ultimately inferior (Naidoo, 1996). The result of the use of this model was that black South Africans were viewed as inherently pathological when compared with a white norm which provided a philosophical basis or justification for the segregation enforced during apartheid (Naidoo, 1996).

2.4.2. Concerns Regarding Psychological Practice in the South African Context

An appropriate starting point in discussing more recent concerns regarding psychological practice in South Africa, appears to be the division between psychological practice and numerous social problems faced by many South Africans. These problems include poverty, homelessness, income inequality, access to education, the prevalence of HIV/ AIDS along with political concerns held by many black South Africans including land reform and black economic empowerment (Macleod, 2004). It has been found that there is significant space for progression and improvement on the part of psychological practice in South Africa when it comes to addressing racial inequality and the issues which black South Africans experience as a result of this inequality. The distance between psychological practice and the lived experiences of

many South Africans indicates a fundamental difference between Western and African conceptions of the practice at a societal level (Macleod, 2004).

Beyond simply an awareness, the lives of the black majority in the South African context is a need for psychological practice in South Africa to find a way of communicating with this population. Long (2013) discusses difficulties with psychology in South Africa which includes a dearth of black psychologists and psychologists who are able to speak at least one of the country's indigenous languages. In a more theoretical sense, Long (2013) explores the nature of psychology as a European conception, which views human behaviour through a western lens. There is ultimately a call for a psychological practice which incorporates traditional healing as well as traditional African philosophies (Sher & Long, 2012). This does not however appear to be a South African concern only. Earlier mention was made of the fact that globalisation is leaving more and more countries with diverse populations.

For instance, Thompson et al. (2004) conducted research with an African American sample and identified numerous barriers between individuals and psychotherapeutic practice. He found that in addition to culturally specific barriers such as the expectation that African Americans remain strong and not be seen to require mental health services, there was a general mistrust of psychological practitioners, who were seen to be unsympathetic and removed from the communities they served. There was also an apparent mistrust in the ability of psychotherapists to appreciate client specific contexts and a feeling that psychological interventions were invasive, impersonal, and costly (Thompson et al., 2004). With a lack of black South African psychologists and psychologists who can speak at least one indigenous language, one can assume that the same might apply to the South African population, with a general mistrust in psychological services, creating a mistrust in psychological and cognitive assessment measures.

To complicate matters further, specifically as we move towards the sphere of cognitive assessment measures, is the concern around language and the fact that the majority of the South African population does not speak English as a first language; the language in which internationally used cognitive assessment measures are published.

2.4.3. Language and Cognitive Assessment Measures

A very significant variable to consider when exploring cognitive assessments, along with the perceptions around them, is the language proficiency of the child being assessed. Cummins explored the differences between Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP), along with their impact on the ability of the learner to achieve in the classroom and perform on assessment measures. BICS refer to what is described as conversational fluency and develops during the course of informal, social interactions. Academic language ability or CALP is developed in the classroom environment, where the ability to master the language in a formal and academic way is developed (Cummins, 2017).

The importance of academic language skills is illustrated by the case of a child who presented with a low average score on her FSIQ. It needs to be noted, however, that during the course of the assessment, the child presented with a verbal IQ score of 64 and a non- verbal IQ score of 108, indicating a significant discrepancy between these two scales. Underdeveloped academic English likely resulted in this discrepancy and almost certainly offered a deflated indication of her FSIQ and in turn her overall academic ability (Cummins, 2017). An investigation into academic English language proficiency in Southern African classrooms indicate that there are structural barriers to the acquisition of the language skills necessary to achieve in the classroom and in assessments (Cummins, 2017; Uys, Van Der Walt, Van Den Berg, & Botha, 2007). The structural barriers largely come in the form of educators' competence. Many of the educators who had been surveyed indicated that they did not have the skills to educate their learners in language proficiency and did not have personal mastery over the language skills necessary to pass these on to learners (Uys et al., 2007). This indicates that South African children are struggling to develop their English language skills in the classroom which will compromise their performance as they engage with both school assessments and cognitive assessment measures (Cummins, 2017).

The language barrier between practitioner and child can have a further impact on the outcome of a cognitive assessment. Research conducted by Flores (2006) on a Latino

sample in the United States find that individuals who experience a language barrier in care are more likely to abandon the treatment early, not attend follow up sessions and not adhere to their medication. There is also an established link concerning language barriers between the individual and practitioner and overdiagnosis (Flores, 2006) leaving the individual to have been deprived of an accurate diagnosis which would inform a clear treatment plan. Jacobs, Shepard, Suaya, and Stone (2004) concluded that individuals with language barriers will naturally have less of an understanding of the care which they have received than if they were able to effectively communicate with the practitioner. This breakdown of communication is also found to result in a greater number of medical errors on the part of the practitioner (Jacobs et al., 2004). It therefore stands to reason that in the case of a cognitive assessment, when the practitioner, the parents and the child experience a language barrier, they will naturally experience a breakdown in communication and the execution and outcome of the assessment will not reflect the reality of the child. This will naturally impact any diagnosis made, as well as the recommendations stated, and interventions planned.

2.4.4. Predictive Validity of Cognitive Assessment Measures

In addition to issues around language, one must also consider the effectiveness of the measures themselves in terms of predictive validity. A cognitive assessment, which might be applied to children at a primary school level, does not in fact prove the greatest indicator of academic performance. A study of middle school learners by Duckworth and Seligman (2005) indicated that it was self-discipline, particularly as it is indicated by a mindset geared towards self-gratification, and not cognitive assessment scores that proved the greatest predictor of academic achievement. It would be fair, therefore, for parents not to consider the outcome of a cognitive assessment measure to be the final indicator of their child's future success (Duckworth & Seligman, 2005).

Similarly, the relationship between cognitive ability, as measured by cognitive assessment measures, and academic performance, was found to be less important than the relationship between academic performance and conscientiousness. Furnham and Chamorro- Premuzic (2004) investigated a sample comprising university students, and found that out of three factors of academic achievement, being seminar performance,

personality traits in relation to the "big five" personality factors of neuroticism, extraversion, openness to experience, agreeableness and conscientiousness, and intelligence as determined by the Wonderlic Personnel Test, the Shepard & Metzler Test of Rotation Ability and the AH5, a group test of general intelligence (Part 1), seminar performance was the greatest indictor of academic performance, followed by personality, particularly in terms of conscientiousness with scores obtained on the cognitive assessment being the weakest indicator of academic performance (Furnham & Chamorro-Premuzic, 2004).

As discussed in chapter 1, it is hypothesised that the legacy of mistrust created by the misuse of psychological practice and psychological assessment measures during the Apartheid years; together with more pressing issues in current practice in psychology in South Africa, can leave parents feeling apprehensive in allowing their children to be assessed on cognitive assessment measures. Adding to these are concerns regarding the impact of language barriers on the outcome of cognitive assessment measures and a mistrust in the predictive ability of these measures. The question that then remains is why we continue assessing specifically South African children on cognitive assessment measures?

2.5. The Value of Cognitive Assessment Measures

Cognitive assessments have the potential to support the population they serve. In spite of the controversy around their efficacy (Duckworth & Seligman, 2005), cognitive assessments are developed with a diagnostic function aimed at supporting children with special education needs (Bagnato, 2007). Assessments allow not only for the identification of children with developmental difficulties who are in need of remedial support, but also allow for the development of a specialised intervention plan which can be used to remediate their difficulties (Bagnato, 2007; Blair & Wahlsten, 2002).

> *"Assessment is a pivotal event for families and their children; assessment results are used to include children in specialized interventions that can change their developmental destinies"* (Bagnato, 2007, p.2).

Assessments also allow for the monitoring of such interventions as a means to observe and confirm their efficacy (Bagnato, 2007). Blair and Wahlsten (2002) further found that appropriate assessments can support early intervention programmes which have a profound impact on the developmental potential of children with special education needs. For instance, a study conducted on children between the ages of 2 and 5-years found that early intervention programmes improved FSIQ scores up to 9 points. This indicates that intervention programmes and enriched environmental support has the potential to optimise development in children with learning and intellectual difficulties (Blair & Wahlsten, 2002). Guralnick (2005) also found early interventions to be of significant benefit for learners with special education needs and found that there was a great deal of potential for such programmes to be beneficial in the future, with the correct use of appropriately rich frameworks for remediation.

In the wake of the introduction of Education White Paper 6 (Department of Education, 2001), South Africa is proving to be fertile ground for the development of such remediation and intervention programmes. This policy aims to provide a rich learning environment which is able to support learners of all backgrounds and educational needs (Swart, Engelbrecht, Eloff, & Pettipher, 2002). Walton (2011) found that interventions at an inclusive education level would require a commitment by school management, educators and parents along with specific training for educators working in the field and notes that there will be significant challenges towards achieving this buy in and developing this training.

However, it also requires the appropriate identification of children with specific learning difficulties, followed by suitable intervention programmes (Poletti, 2014). As established in the first two chapters of this report, the administration of appropriate cognitive assessment measures in the South African context comes with many challenges, which then leads one to ask what can be done to potentially improve the situation and moreover, in the context of this study, hypothetically positively impact parents' perceptions of these measures?

2.6. Looking Towards the Future

Central to the progression of psychology in South Africa is a critical exploration of the nature of the practice and the role which psychology plays within the population. To this end, it would be important for practitioners to employ the underlying philosophy of critical psychology into the evolution of the practice. Critical psychology refers to an understanding of psychology as being driven by certain types of knowledge and practices which are promoted by mainstream psychology and the critical engagement with this knowledge and practice (Hook, 2001). There are very few areas of psychological practice in South Africa where critical practice is more pertinent than in education.

The evolution of psychological practice in South Africa towards a more critical and inclusive intervention would need to incorporate cultural competence. Cultural competence refers to a practice in response to the idea of assimilation and integration which has dominated the practice of psychology in terms of working with people of non-western cultures and has resulted in a great deal of bias, particularly in terms of assessments (Thompson et al., 2004). Cultural competence refers to the exploration, understanding and appreciation of cultures from a non-western background so as to improve the working relationship with these individuals in terms of psychotherapeutic practice (Sue, 2006). Cultural competence, when engaging a client in counselling, can ultimately be considered to be a way of working with an individual in such a way that their uniqueness is considered and understood in a holistic way, taking into consideration their cultural backgrounds as well as other societal factors which make up their environment (Reich & Reich, 2006).

Cultural competence is a philosophy, but also involves a series of skills and characteristics which practitioners can introduce. Sue (2006) discusses three characteristics which are fundamental to cultural competence in psychological practice. The first characteristic is scientific mindedness, which refers to the practice of forming hypotheses about clients based on science and reason as opposed to ones based on the prejudice related to race, ethnicity, culture, and religion (Sue, 2006). Dynamic sizing is the second characteristic and refers to the practitioner understanding the client and

therapeutic context to the extent that they are able to generalise about the client when this is appropriate and individualise when this would be appropriate (Sue, 2006). The third characteristic is culture-specific elements, which refers to psychological practitioners having an understanding of their own cultural background as well as the cultural background of their clients so that they can make use of culturally sensitive and relevant interventions and skills in the therapeutic space (Sue, 2006).

Kirmayer (2012) argues that there may be alternative approaches to cultural competence. In this regard the author states that a practitioner can be culturally responsive, culturally humble, or culturally safe. Cultural safety refers to the idea of moving beyond the idea of being culturally sensitive and addressing the power imbalances both current and historical in the relationship with the client. Cultural safety builds on the philosophy of cultural competence which espouses cultural awareness by using this awareness to address power imbalances (Kirmayer, 2012; Sue, 2006). Cultural safety relies on the processes of cultural humility and cultural responsiveness, whereby the practitioner is open to learning about themselves and open to learning about the lived experiences of those with whom they work (Kirmayer, 2012).

In addition to cultural competence, Laher and Cockcroft (2014; 2017) focus specifically on the field of psychological assessment and cognitive assessment measures and indicate the importance of dynamic assessment in moving towards more culturally appropriate assessments. In addition, these authors advocate for the inclusion of assessments focussed on learning potential, rather than acquired knowledge or cognitive functioning at a particular point in time. The inclusion of more non-verbal assessments, as well as assessment measures focussed on the manner in which children process information can also be considered (Laher & Cockcroft, 2017; Mitchell et al., 2017).

2.7. Conclusion

Together with chapter 1, this literature review explored many potential factors which can theoretically have a negative influence on parents' perceptions of cognitive

assessment measures; leaving them reluctant to allow their children to be assessed on these. In this regard, Laher and Cockcroft (2017) write:

> *"…psychological assessment is still viewed with some suspicion in South Africa, although this view seems to be diminishing. Considerable research has been conducted over the last 15 years to establish reliable, valid, and fair psychological tests, and this has contributed to gradually changing the national perception to one that increasingly sees psychological assessment as an acceptable and valuable practice" (p.309).*

The purpose of this study was to establish to what extent this more positive conceptualisation of psychological assessments is held by South African parents; specifically, as it pertains to cognitive assessment measures. The next chapter will explore the methodology used in reaching this aim.

CHAPTER THREE: PROCESS OF RESEARCH

3.1. Introduction

The methodology of this study was centred on a descriptive, exploratory, survey- based design constructed in such a way that the perceptions of parents regarding cognitive assessment measures were established, along with the factors influencing these perceptions. To this end, quantitative closed-ended questions were used to establish broad perceptions, while the qualitative portion of the survey was used to establish the underlying factors in terms of the participants' own experiences with such measures and psychological interventions in general. The philosophy behind qualitative methods is an in-depth approach to research whereby the sample under exploration is investigated in terms of the way in which they make sense of the world around them and the experiences to which they had been exposed (Willig, 2013).

During the course of this exploration, the researcher was able to investigate how the subjects perceive the world around them which would make qualitative research the most appropriate methodology for the purposes of this research, where parents' perceptions are explored (Smith, 2015). In exploring perceptions, the instrument was constructed and employed in such a way that the participants were given a voice which has historically been denied them (Macleod, 2004) and allowed them the opportunity, particularly when it comes to the open- ended portion of the survey, to discuss their experiences with cognitive assessment measures and psychological interventions in a broader sense.

3.2. Qualitative research

Qualitative research methodology is an approach to research whereby a researcher comes to better understand the world by better understanding the meaning that people ascribe to it (Creswell & Poth, 2016). Researchers making use of this methodology will seek to collect data from people in natural settings and then study this data so that themes and patterns can be identified. These patterns aid the researcher in understanding the worldview of the populace under investigation (Creswell & Poth,

2016). Hollstein (2011) agrees that the purpose of qualitative methodology is to investigate and explore meaning and adds that this is achieved through developing an understanding of those people under investigation in as thorough a way as possible. This thorough understanding is likely essential as Hollstein (2011) insists that the meaning which people ascribe to their world cannot be separated from the context in which those people live.

3.3. Epistemological approach of the study

With such a qualitative philosophy underpinning the research, the epistemological approach can readily be described as following a constructionist paradigm. Constructionism holds that reality is such that it is brought into being by the people who experience it (Roots, 2007). In line with the philosophy of Hollstein (2011), constructionism postulates that reality is context dependent and is ultimately shaped by cultural, social, and historical factors (Roots, 2007). With the purpose of this research being to understand the perceptions which parents have of cognitive assessment measures, and an understanding of the significant role which social factors can play in the emergence of these perceptions (Cockcroft & Laher, 2014), a qualitative approach with constructionist underpinnings would be the most appropriate (Hollstein, 2011; Roots, 2007).

3.4. Research Design

This study was an exploratory, descriptive, survey-based study, which investigated the perceptions that parents have towards the cognitive assessment measures as they are used with respect to their children. Exploratory research involves a planned endeavour towards the establishment of generalisations which can be applied to a community or society at large. These generalisations are developed with the intention of creating a clearer or deeper understanding of a certain aspect of either social or psychological life (Stebbins, 2001). Exploratory research is centred on the formulation of hypotheses around social life, as opposed to the exploration of already established hypotheses (Kothari, 2004).

Exploratory research was seen as appropriate with regards to this research study as I attempted to establish a tentative understanding of an area of social life which appears to be largely unexplored, namely the perceptions which parents have regarding the assessment of their children. The insights offered through the exploration of the data collected for this research will also give scope to practitioners as they work towards a more integrated and culturally compatible model for assessment and intervention (De La Ray & Ipser, 2004).

In order to establish a clearer understanding of the insights developed through exploratory research, it was important for the research to include a descriptive component. Descriptive research involves an investigation into what is going on, and can include descriptions both concrete, with a focus on statistical descriptions and abstract, with a focus on philosophical descriptions (De Vaus & De Vaus, 2001). The study focussed on the latter, being abstract descriptive research, where the perceptions which parents hold regarding cognitive assessment measures were explored and described.

The qualitative component of the research instrument aimed to establish why it is that parents have developed the perceptions around cognitive assessment measures that they have. The design as it involved descriptive and exploratory components was advantageous in terms of this study as it allowed for the inclusion of explorations of both the perceptions which parents have regarding cognitive assessment measures as well as why it is that these perceptions have emerged, which is effective in terms of the rationale of the study.

This exploration and establishment of insights was built on data collected through survey-based research (Groves et al., 2011). A survey, in terms of this research, was an effective way of gathering information on a very large population, parents of primary school age children. The descriptors applied to the insights gained would be very effective in terms of establishing a broad understanding of this population in terms of their opinions around and experiences of assessment measures. These insights and understandings can provide an effective means to guide practitioners in their striving

towards the societal and cultural evolution of their assessment practices and interventions (De La Ray & Ipser, 2004).

3.5. Sample

Non-probability purposive sampling and convenient sampling techniques were used for the purpose of this research. Non-probability sampling is a method of research where the necessary sample is established through selective judgments, which is to say that the sample is specifically selected by the researcher as it fits specific criteria under investigation (Tansey, 2007). While this method of sampling does limit the generalisability of the results, it was necessary to find a sample of participants whose children are enrolled in schools, both government and independent (Tansey, 2007).

To this end, a purposive sampling technique was used. This was to ensure that the research questions and aims of the study were taken into consideration in the selection of participants (Teddlie & Yu, 2007). Purposive sampling involves the researcher establishing the aims of their research and thereby the information which they intend to gather and using this to select a sample which is in the best position to provide this information. Purposive sampling often makes use of what is termed the “key informant” technique. This technique involves the use of an individual close to the desired sample who acts as a “guide”, assisting the researcher as they navigate the sample and its culture (Tongco, 2007). The headmasters of the schools solicited for this study served as the key informants for the sample under investigation. These headmasters assisted the researcher in accessing the sample by establishing the best means to reach and communicate with the sample. The specific type of non-probability sampling included purposive convenient volunteers solicited with the aid of the headmaster as key informant (Tongco, 2007).

The key informants, and the sample along with them, were accessed through convenience sampling. Convenience sampling is a type of sampling where the population is sought out due to their proximity to one another in a geographic area which increases the ease by which the researcher is able to access the population (Etikan, Musa, & Alkassim, 2016). The initial sample was accessed through a

convenient location, which were schools, where the population under investigation were expected to be present.

The initial sampling technique failed to reach a large enough sample with only 39 respondents obtained in this manner and as such, an alternative method was introduced in the form of snowball sampling. Snowball sampling is an approach to data collection whereby new research participants are accessed through the contacts of present participants.

> *"Informants refer the researcher to other informants, who are contacted by the researcher and then refer her or him to yet other inform-ants, and so on" (Noy, 2008, p. 330).*

Individuals known to the researcher were contacted and asked to pass the survey on to individuals they knew who fit the criteria of the desired sample. In addition, schools approached were encouraged to alert others who might be interested and fitted the criteria, to approach the researcher should they wish to partake.

3.5.1. Challenges associated with the sampling process

Non-probability sampling, such as that which was used for the purpose of this research, is not without its limitations. Singh (2015) described the disadvantages of non-probability sampling as it pertained to social research. He found that among the disadvantages of this method of sampling is the influence of researcher bias which can limit the sample to only those members of population which might conform to their hypothesis around the results.

> *"Convenience samples are prone to bias by their very nature-selecting population elements which are convenient to choose almost always make them special or different form the best of the elements in the population in some way"* (Singh, 2015, p. 17).

While the researcher's hypothesis of the possible results of the study did not play a part in the sampling of this study, there was an unintended bias towards the inclusion of the independent schools and model C government schools in terms of the research sites which were contacted. With email having been the primary method of communicating with research sites, under -resourced schools may have been excluded from the research altogether. Singh (2015) continues that there is also a lack of objective control over the degree to which the sample represented the population and reliability of the responses which the sample contributes to the research. This was particularly so when it came to the research. The method of sampling was therefore at risk of producing a very small sample, with very few participants who had had experience with assessments if any at all. As implied in the previous paragraph, there was also a risk that the participants obtained would only represent those of one economic bracket, at the expense of people from more under-resourced backgrounds.

The initial plan for the study was for the sample to comprise 100 participants including parents of primary school age children. There were difficulties in obtaining this sample and the data collection process proved to be lengthy and problematic. Many schools were contacted throughout the Johannesburg municipal area and only a handful responded to the invitation. Of these, only two schools agreed to participate in the study, an independent school, and a government school. From these two schools and the additional participants reached through snowball sampling, only 40 parents agreed to partake in the study. There are a number of possible reasons as to why it is that the response rate was so low. One possible reason was a general lack of exposure to assessments or psychological services in general among parents, a lack of understanding as to the nature of the survey and possible lack of available time to engage with the survey regardless of experience and understanding.

The independent school further insisted that the survey only be made available online as the school conducted all of their communications with their parents online. The school headmaster was emailed a link to the survey available online. The link was then emailed out to the parents of the school with 26 parents completing and submitting their questionnaires. The data was therefore somewhat limited. The government school also distributed the link to the survey out to their parents and a further 13 responded

from this school. One participant did not indicate which school he/she was from. It is possible that some, if not many of the parents, did not have access to email. This limited the extent to which they were able to participate in this study. At this time snowball sampling was introduced; however, no participants approached in this manner completed the questionnaire.

3.5.2. Inclusion and Exclusion Criteria

Parents from both government and independent schools were approached; however, the research's focus fell on primary schools as it is often during their primary school years that children are referred for psychological assessments. The criteria therefore excluded parents of children out of primary school. Parents who resided beyond the Johannesburg metropolitan area were excluded from the sample which also limited the study to a significant degree. Participation was voluntary and participants were not excluded based on race, culture ethnicity, gender, or nationality. Participating schools and parents were not explicitly excluded based on language, but the medium of the survey was English, which would implicitly exclude those not sufficiently proficient and/or comfortable in this language. Schools were not excluded based on whether or not they were special needs or full service schools, although no special needs schools agreed to participate in the study.

3.6. Measurement Instrument

The instrument used during the course of this study was a self-designed survey, involving both open and closed-ended questions. This survey was used to ascertain the perceptions which parents hold towards cognitive assessment measures as used in relation to their children and the factors which influenced the development of these perceptions. Surveys are a means of collecting data around a specific set of variables from a number of participants. The benefit of using a survey in social research is that it allows for researchers to compare the responses offered by participants on a specific set of topics (De Vaus, 2013). The survey will therefore allow me to compare the responses given by the sample and

develop a holistic understanding of these responses so as to explore why it is that these perceptions have emerged.

One of the most significant limitations of surveys, in terms of online surveys as they were used in this research, was accessibility. It is found that online surveys limit the sample to those who have access to an electronic address, or email through which the questionnaire was sent out (Ilieva, Baron, & Healey, 2002). This limited the sample and likely the diversity of the responses which were garnered. Online surveys also suffer from poor accessibility due to not being user friendly (Ilieva et al., 2002). In terms of this research, all efforts were made to ensure that the questionnaire was as user friendly as possible but there were still areas where participants were likely to feel confused. Question 13, asking what motivated parents to have their children assessed might have been a difficult question to answer and might have been somewhat too philosophical. Question 15, which inquired after the outcome of the assessment, might have been too vague and participants might have struggled to articulate the intricacies of the assessment results and the measures they may have been advised to take (See Appendix A).

This confusion can often lead to lowered response or completion rates which may have been compounded in this research by the absence of the researcher during the survey completion process. It has been found that participants often stopped completing the survey when confronted with a complex question grid (Solomon, 2001). Participants were also found to abandon surveys when confronted with questions asking for personal information, which formed a significant portion of the questionnaire used in this research (Solomon, 2001).

The closed-ended portion of the questionnaire, where the perceptions around cognitive assessment measures and experiences with cognitive assessment and therapy was investigated, involved a series of closed-ended questions, inviting yes or no answers from participants determining how they feel about the effectiveness and appropriateness of cognitive assessment measures. More open-ended questions explored participants' yes and no answers further by inviting them to elaborate and explain their answers in more depth. The first portion of the questionnaire, which ascertained demographic

information, also included closed-ended questions. The final portion of the questionnaire allowed participants to elaborate further on the answers they gave in the second portion by inviting them to discuss their own experiences with cognitive assessment measures and psychological interventions in general and also to share how they feel that these measures and these interventions can be altered to become more appropriate to the wider population. It took participants approximately 15 minutes to complete the questionnaire.

The presentation of the questionnaire differed depending on whether it was completed online or as hard copy. The hard copy questionnaire would have been presented on A4 paper and it would have been quite easy for participants to refer back to previous answers while completing the questionnaire, which they were required to do on a number of occasions (See Appendix A). Both participating schools made exclusive use of the online questionnaire and this involved clicking through answers and moving from one page to another. Once a question had been answered, the page centered on the next question while largely obscuring the preceding question. With there being a number of questions requiring the participant to think back to previous answers, it would have made these portions of the questionnaire somewhat more difficult for them to complete, thereby challenging the efficacy of some of the answers given. The online survey was used by both schools along with the participants accrued through snowball sampling.

3.6.1. Closed-Ended Questions

Closed-ended questions were used to determine the biographical/ demographic information of the participants such as language, ethnicity, and level of education. Closed- ended questions, requiring “yes” or “no” answers, were also used to determine whether the participants had consented to their children being assessed, whether they had been assessed themselves and whether they had consulted with a therapeutic practitioner for instances besides any experience with assessments. The closed-ended questions allowed the researcher to answer the primary and secondary research questions, with the demographic portion allowing for links to be made between perceptions discussed and sociocultural or socioeconomic factors. The closed-ended questions also allow for a broad overview of perceptions, in terms of the first research

question, to be developed along with a broad overview of the experiences that the participants have had with assessment and psychological services.

3.6.2. Open-Ended Questions

Returning to the philosophy discussed by Willig (2013), the qualitative nature of this research allowed participants a more open-ended space with which to discuss their feelings and experiences. This space was offered more within the context of the open-ended portions of the questionnaire than the closed-ended questions. These open-ended questions allowed for the aim of the study, being an exploration of the parents' perceptions of cognitive assessment measures, to be met. The open-ended questions allowed for the more expansive research questions to be answered, particularly in terms of their experiences with assessment and psychological services. Closed-ended questions throughout the questionnaire typically also included open-ended components allowing participants to elaborate on their answers on these questions. These opportunities for participants to elaborate allowed the researcher to develop a greater understanding of the population under investigation and why it is that they feel the way they do regarding cognitive assessments. These open-ended questions also allowed participants to share their views on the appropriateness of these interventions and ways in which they can be more appropriate.

3.6.3. Evaluating the Qualitative Survey

When evaluating the efficacy of measurement instruments, such as the survey used in this research, one must first consider its validity. Validity refers to the extent to which the instrument measures what it intends to measure (Etchegaray & Fischer, 2010). Taherdoost (2016) describes four broad subtypes of validity, particularly as they apply to survey based research. First among these is face validity, or the extent to which a respondent is able to recognize the constructs under investigation in the survey questions (Taherdoost, 2016). The questions of the survey were structured in such a way that reference was frequently made to assessments as a psychological intervention, but the terms therapy or counselling are never explicitly stated when the survey makes implicit reference to this intervention. Respondents appeared to have been able to understand the

underlying question and answer appropriately. Content validity refers to the degree to which the instrument is able to measure the construct under investigation (Taherdoost, 2016). When it comes to content validity, an extensive literature review on cognitive assessments and therapy was undertaken. This provided an understanding of these constructs which guided the structure and depth of the questions in the survey. An exploration of literature informed the researcher in the inclusion of such items as career assessments and school readiness assessments when discussing the nature of their children's experience with assessments. It was difficult to allow for all possibilities in this regard, however and participants were given scope to discuss assessments not included in the closed ended questions (See Appendix A).

Construct validity (specifically in terms of convergent validity), according to Taherdoost (2016), is the extent to which a test is able to measure a specific construct, particularly in terms of causal relationships with other constructs. When it came to construct validity in terms of this research, it was important to establish that experiences with perceptions are related to perceptions which are in turn related to the decision to engage with assessments in future. The literature around perceptions, particularly as they related to experiences, proved very important. Exploring the theory of Ajzen (1991) along with Lerner et al. (2015) informed the items of the survey as they pertained to the experiences which both respondents and their children had had with assessments and psychological services. It achieved this by creating a model whereby perceptions and its effects could be understood relative to decision making (Ajzen, 1991; Lerner et al, 2015; Taherdoost, 2016).

Finally, Criterion validity (specifically in terms of predictive validity), refers to the ability of a measure to predict a specific outcome (Taherdoost, 2016). The research aimed to predict whether or not parents would develop a negative view of assessments and not engage with them based on negative experiences (and vice versa). This proved more difficult to achieve. Although the General Model of Decision Making as espoused by Lerner et al. (2015), provided a predictable pattern of responses to experiences, the results of this research provided an unexpected outcome in terms of the theme "Parent's Desire to Support their Children". This theme challenged the view that respondents

might be completely against engaging with assessments if their experiences with and views of measures had been negative (Taherdoost, 2016).

As this survey instrument is qualitative, it would be important to consider its trustworthiness and authenticity. Trustworthiness, according to Shenton (2004) can be achieved by fulfilling four criteria. These criteria are credibility, transferability, dependability and confirmability. Credibility relates to validity, which was discussed in the previous paragraph with reference to Taherdoost (2016) (Shenton, 2004). Transferability refers to the extent to which the findings of the study can be applied to different situations (Shenton, 2004). The nature of the survey, in terms of its medium being English and the extensive use of email to send it to participants limited the scope of the sample and ultimately the extent to which the results of the research can be applied to other situations.

The dependability of the survey and the process of data collection is related to the act of detailing the nature of the research instrument and process for the purpose of repeating it (Shenton, 2004). While the survey and the process of data collection serve as an effective "prototype" for similar research in future, work on the language used and the means of delivering the instrument to a prospective sample would need to be made more inclusive to improve the scope of the sample and the data in future. Confirmability is related to objectivity, or the extent to which the researcher is able to credit the data collected (and the findings based on this data) to the subjective experiences of the participants as opposed to the underlying beliefs of the researcher (Shenton, 2004). In terms of this research, the open ended nature of many of the survey's questions were helpful in terms of giving voice to the subjective experiences of the participants (See Appendix A).

Conformability links quite closely to the concept of authenticity, or the extent to which the subjective experiences of the participants inform the data and the results of the research (Fade, 2003). One means to achieve this, according to Fade (2003), is to include large portions of unedited data into the report. The survey itself allowed participants the space to discuss, in as much detail as the chose, their experiences with and feelings around cognitive assessment measures specifically and psychological

services in general. Significant portions of these discussions were included in, and informed the direction of, the discussion of results in Chapter 5. Another means to ensure authenticity is through the opening up of questions to allow for the participants to guide their respondents as opposed to the researcher doing so (Fade, 2003). Open ended questions and space for elaboration feature throughout the survey, with question 29, inviting participants to offer their recommendations to practitioner, being a particularly strong example of this (See Appendix A).

3.7. Procedures

Before the population was accessed, ethical clearance was obtained from the University of the Witwatersrand Human Research Ethics Committee (Non-Medical), as well as permission from the Gauteng Department of Education, as government schools were contacted to participate in this study. Once the ethical clearance was obtained, the headmasters of schools were sent emails containing an approach letter which elaborated on the nature of the study. Once the headmasters agreed for their schools to participate in the study, the researcher requested the Administration Department of the school to send out a notice to their parents inviting them to participate in the study and complete a questionnaire which were made available to them online, with the use of SurveyMonkey. The schools were asked to attach a link to the online questionnaire in the notice. This procedure allowed for both confidentiality and anonymity to be assured. In addition to contacting participants through schools, they were obtained through snowball sampling as discussed earlier. Once the data was collected, it was analysed using Braun and Clark's Thematic Analysis in terms of the qualitative responses with a frequency distribution being used in the analysis of the quantitative data collected through the closed-ended-questions (Babbie, 2015; Boone & Boone, 2012; Braun & Clarke, 2006).

3.8. Ethical Considerations

For the purposes of the study, ethical clearance was required and obtained from the University of the Witwatersrand Human Research Committee (Non-Medical) (Ethics Clearance Number MEDP/ 18/ 007 IH) (Appendix E). In addition,

permission was sought and obtained from the Gauteng Department of Education for the inclusion of government schools in this research study (Appendix G). Permission from the Gauteng Department of Education was renewed in 2019 (Appendix H). Only once this had been obtained, were the headmasters of government schools asked for their consent via email with an approach letter attached (Appendix B).

For the inclusion of independent schools, permission was sought directly from headmasters. Once the clearance and the permission had been attained, the schools were contacted via email which included an approach letter as an attachment (Appendix B). Only once written consent had been obtained from the various headmasters, were the prospective participants contacted (this consent cannot be included for confidentiality and anonymity reasons). As noted, only one school agreed to participate and the participants (parents) were contacted by the school via email which included a link to the survey.

The participants of the study did not represent a vulnerable population and by not asking them to include their names on the questionnaires when they completed them, both anonymity and confidentiality could be ensured; however, as they were asked to respond about sensitive topics, the questionnaire included referrals to organisations offering assessment and counselling services, including the WITS, Emthonjeni Centre, FAMSA and PsyCaD (see attached Appendix A).Confidentiality and anonymity were also guaranteed to the schools who partook in the study and thus, no identifying particulars or information that can be traced back to these schools have been included in this report. Participation in the study was completely voluntary and parents were able to respond to the call for participation at their own will by completing the questionnaire online. Once they had submitted their completed questionnaires, they were not able to withdraw as there is no way in which completed questionnaires could be traced to individual participants.

Participants were also informed that by submitting their questionnaires, they were in fact consenting to partake in the study and for their responses to be used in compiling the final research report or any publications that may arise from it. Parents were also informed that they had a right not to answer questions which they did not

feel comfortable with. The study was unlikely to harm any of the participants or the researcher.

The results of the study have been compiled in this research report, from which additional publications in the form of peer-reviewed journal articles and conference presentations may arise. Parents were informed of this and should they wish, they could obtain a summary of the results by emailing the researcher, although they will not receive individualised feedback. Completed questionnaires, and the associated data were kept on a password protected computer in terms of the data collected online. The data will be kept for a time following the conclusion of the study to allow for it to be used in future research on the topic. Participants were informed that the data will be kept and may be used again in future.

3.9. Data Analysis

When it comes to the quantitative data collected from the study, in terms of the relationship between demographic factors of the participants and their responses to the yes/no questions in the second section of the study, a frequency distribution was used. Frequency distributions involve a description of the number of instances in which an attribute is observed in a sample under investigation (Babbie, 2015).

The second and third portions of the questionnaire contained qualitative open-ended questions and the data that were collected from this section of the questionnaire was analysed using a thematic analysis as developed by Braun and Clarke (2006). When it comes to using thematic data analysis, the objective was the identification of themes, ideas or patterns in responses collected and the analysis of these patterns so that a conclusion could be made regarding the phenomenon under exploration (Braun & Clarke, 2006). The practical process of thematic analysis was centred around the generation of “codes” which were used to analyse the data and identify patterns in responses which were concurrent with the codes that were identified (Joffe & Yardley, 2004). The codes were only developed during the course of analysing the data, in short, the process of coding involved the identification of patterns or consistencies (Joffe & Yardley, 2004).

Thematic content analysis comprised six phases which were navigated during the course of this study (Braun & Clarke, 2006). The first phase involved exploring and familiarising oneself with the data which had been collected, so as to understand, at as great a depth as possible, the content of what has been collected. This was the point of the analysis where themes began to emerge from the data. The second phase of the analysis was the generation of initial codes. During this phase, ideas, or concepts which were repeated within the data were noted and collated for future analysis. The third phase followed on with the codes identified in phase 2. The third phase involved the searching for themes in the data that were collated during the course of the second phase. The fourth phase involved the revision and the refinement of themes that had been collated. This phase saw the researcher take note of any patterns that emerged in the themes and eliminating themes that proved problematic or do not fit the emerging pattern. Once these patterns had emerged and the themes had been refined, we moved onto phase five, during which the themes were defined and named. This phase involved the formal linking of themes, along with the establishment of subthemes if these emerged. Phase six was the final phase, during which the themes, which had been finalised and linked, were used to write up the final research report which integrated the themes in such a way that the research questions were answered (Braun & Clarke, 2006).

3.10. Conclusion

This chapter discussed the research design and methods employed in answering the research questions. Mention was made of the design of the study, the inclusion of a survey as measurement instrument, the sample approached, the procedure followed, the analysis of the data and then the ethical considerations taken into consideration throughout the research project. The next chapter will provide insights into the data obtained from the surveys completed.

CHAPTER FOUR: RESULTS AND DISCUSSION

4.1. Introduction

Despite a limited response rate, the discussions by the participants through the survey proved to be quite rich in terms of perceptions and experiences. The closed-ended questions of the survey: providing broad demographic and experiential information related to the sample will be discussed first, followed by an exploration of the data obtained through the survey's open-ended questions. The closed-ended questions will be analysed through frequency distribution and then discussed qualitatively.

Through the use of the model of thematic content analysis (Braun & Clarke, 2006), ten themes were identified from the data. Six of these themes were clustered together as primary themes, which directly related to the aims and questions of the research. These themes included the applicability of the assessments in the South African context with reference to culture and language, the relationship between the practitioner and the child, the predictive efficacy of the assessments with reference to concerns around the application of labels, the logistical accessibility of the assessments, outdated and old fashioned language, and social stigma applied to people in need of psychological services. In addition to these primary themes, three secondary themes, not directly related to the data collected, were also identified and contextualised the parents in terms of their own experiences with assessments and feelings. These themes included the relationship which parents have with the school in terms of the support which they receive, the parents' own experiences with assessments and the inherent desire of parents to support their children. In this chapter, the themes will be discussed from the perspective of the participants and the answers which they gave in the survey.

4.2. Demographic Nature of the Sample

The sample for this study comprised parents of school children who attend schools in the Johannesburg area. The schools were among a number of schools, both

independent and government, who were contacted and with whom negotiations were held regarding their participation in the study. The sample represented parents from two schools which agreed to participate in the study long with parents obtained through snowball sampling. The sample was not contingent on any demographic variables, such as race or culture, and was chosen from among those who voluntarily participated in the study. The sample was relevant to the study as it is the parents of children and their opinion of the cognitive assessment measures used on their children that were under investigation. Tables 4.1 to 4.7 below summarises the demographic information obtained.

This study was conducted with a sample of 40 parents of primary school children. The sample was largely female, representing two thirds of the overall sample. The sample was unrepresentative in the sense that the vast majority of the participants spoke English as a home language and 28 identified as being white.. The sample therefore leaves a lot of space for diversity, as it is, it only reflects the opinions of a minority of the population (Stats SA, ND). South Africa's population comprises of a black majority which makes up around 80% of the population, while the white population comprises less than 9%, making the majority white sample a poor representation of the population under investigation.

Similarly, the vast majority of the sample speak English as a home language with less than 9% of the population speaking English as a home language. The most widely spoken home language in South Africa is isiZulu, with none of the participants speaking this language at home in terms of the sample (Stats SA, ND).

Table 4.1.: Gender Demographics of Sample

Gender	*Number (N=40)*	*Percentage*
Female	26	65%
Male	13	32.5%
Unspecified	1	2.5%
Total	40	100%

Table 4.2.: Ethnic Demographics of Sample

Ethnic Group	*Number (N=40)*	*Percentage*
Asian	2	5%
Black	5	12.5%
Coloured	1	2.5%
Mixed Race	3	7.5%
White	28	70%
Other	0	0%
Unspecified	1	2.5%
Total	40	100%

Table 4.3.: Language Demographics of Sample

Language	*Number (N=40)*	*Percentage*
Afrikaans	0	0%
English	36	90%
IsiNdebele	0	0%
IsiSwati	0	0%
IsiXhosa	1	2.5%
IsiZulu	0	0%
Sepedi	0	0%
Sesotho	1	2.5%
Setswana	1	2.5%
Sign Language	0	0%
Tshivenda	0	0%
Xitsonga	0	0%
Other	0	0%
Unspecified	1	2.5%
Total	40	100%

The majority of the sample is educated at a tertiary level and earned an annual salary of more than R50 000 a year. The majority of the South African population have not received a university education and many South Africans struggle with unemployment (Statistics South Africa, 2017, 2019). Furthermore, the majority of the sample, n = 26, were parents of children who attended a private school. This indicates that the majority of the sample might have access to private health care services, including psychological services. This may well have had an influence on their experiences with assessments and other psychological services. Public mental health services in South Africa are marked by a variety of concerns and needs. There is a pronounced need for greater equality for resource allocation for mental health services between provinces (Ataguba, Akazili, & McIntyre, 2011). On last investigation, there were also concerns raised about archaic measures and interventions employed by public mental health providers at a government level (Lund, Kleintjes, Kakuma, Flisher, & MHaPP Research Programme Consortium, 2010). Public health care services in South Africa experience challenges related to shortages in terms of human resources and ineffectual management which is not as evident in private healthcare services (Coovadia, Jewkes, Barron, Sanders, & McIntyre, 2009). One can argue, therefore, that there may be a void in the data which would otherwise have been filled by participants who would have had better experience with government mental health services.

Table 4.4.: Mother's Highest Level of Education

Level of Education	*Number (N=40)*	*Percentage*
Primary School (Grade 7)	0	0%
Grade 8 or 9	0	0%
Grade 10 or 11	0	0%
Grade 12 or Equivalent	5	12.5%
Certificate	2	5%
Higher Certificate	1	2.5%
Diploma	7	17.5%
Postgraduate Diploma	3	7.5%
Bachelor's Degree	5	12.5%

Professional First Degree (Postgraduate)	5	12.5%
Honour's Degree	6	15%
Master's Degree	6	15%
Doctorate Degree	0	0%
Total	40	100

Table 4.5.: Father's Highest Level of Education

Level of Education	*Number (N=40)*	*Percentage*
Primary School (Grade 7)	0	0%
Grade 8 or 9	0	0%
Grade 10 or 11	0	0%
Grade 12 or Equivalent	1	2.5%
Certificate	2	5%
Higher Certificate	2	5%
Diploma	9	22.5%
Postgraduate Diploma	4	10%
Professional First Degree (Postgraduate)	6	15%
Honour's Degree	3	7.5%
Master's Degree	7	17.5%
Doctorate Degree	5	12.5%
Unspecified	1	2.5%
Total	40	100%

Table 4.6.: Household Salary per Month

Salary Bracket	*Number (N=40)*	*Percentage*
R0-R5000	0	0%
R5000-R10 000	0	0%
R10 001 – R15 000	0	0%

R15 001 – R20 000	0	0%
R20 001 – R25 000	4	10%
R25 001 – R30 000	1	2.5%
R30 001 – R40 000	3	7.5%
R40 001 – R50 000	3	7.5%
R50 001+	26	65%
Unspecified	3	7.5%
Total	40	100%

Table 4.7.: Broad Type of School attended by Child

Type	*Number (N=40)*	*Percentage*
Government	13	32.5%
Independent	26	65%
Other	0	0%
Unspecified	1	2.5%
Total	40	100%

4.3. The Sample's Broad Experiences with Assessments

Of the participants who participated in the study, 21 were the parents of a child who had undergone a cognitive assessment. As such, even among the very limited sample, just over half of the parents had personal experiences with having a child undergo a cognitive assessment. This speaks not only to the fact that very few South Africans engage with mental health services, which is consistent with the findings of Seedat et al. (2009), but also concerns over the nature of the sample. The sample of this research, already limited by a number much smaller than expected, is also limited by the fact that such a large portion of the population has had little to no experience with cognitive assessments. This would have compromised them in terms of the depth of the answers which they were able to offer in this survey. In the case of parents who had had their children assessed, their children's school had made the referral in 15 cases. As such, it is possible that these parents had little to no experience with assessments as a

service and their perceptions of these services might have been coloured by the way in which the school handled the referral. Here, they depended largely on the degree to which the school was able to support them in navigating the services to which they were referred. Nel et al. (2011), found that many educators in South Africa were very new to special education needs and the ways in which special education needs can be understood and services provided. As such, it is possible that the parents who received referrals from schools did not receive much support with the referral, therefore potentially further influencing the perceptions they have of assessment services.

Table 4.8.: *Whether Child has been Cognitively Assessed*

Answer	*Number (N=40)*	*Percentage*
Yes	21	52.5%
No	18	45%
Unspecified	1	2.5%
Total	40	100

The nature of the assessments was, for the most part, an exploration of difficulties which the child had been experiencing at school, accounting for 14 of the cases and 9 of the cases were assessments for school readiness (see Table 4.9 below). Three participants had not had their children assessed with a cognitive measure but did mention that their children had received either a psychoeducational assessment, an emotional assessment and an Educational Psychology Assessment including assessments by Occupational therapists and Physiotherapists while 2 participants had had their children undergo a career assessment. As such, there is diversity in terms of the assessments with which the participants have had experience. This again will have an impact on the nature of the participants' understanding of cognitive assessment measures in general. Assessments such as those for school difficulties and psychoeducational assessments in particular might also have been influenced by the fact that schools are likely to be involved in referral for these assessments. Again, parents whose children had engaged with these particular assessments might have found the

school system lacking in terms of understanding special education needs and supporting parents in navigating these services (Nel et al., 2011).

Table 4.9.: Nature of the Child's Assessment

Type of assessment	*Number (N=28)*[1]	*Percentage*
Psychoeducational Assessment	14	50%
School Readiness Assessment	9	32.14%
Career Assessment	2	7.14%
Other	3	10.72%
Total	28	100%

Of the parents sampled, 12 had undergone their own cognitive assessments and 15 had consulted with a psychologist in the past. Of those who had not undergone their own cognitive assessments, 8 believed that it would have benefitted them. This indicates that a minority of participants, 30% of the sample, had experienced psychological services before, and some believed that it would have been beneficial. This was quite significant to the results of this study as it indicates that a majority of the participants, 55% of the sample, arrived at the survey with no personal experience of either psychological services or cognitive assessments.

Table 4.10.: Broad Experiences of Participants with Assessments

Answer	*Number (N=40)*	*Percentage*
Yes	21	52.5%
No	18	45%
Unspecified	1	2.5%
Total	40	100%

[1] The total of N = 28 in Table 4.9. differs from the total of 21 children assessed in Table 4.8. due to the fact that some children had undergone multiple assessments.

Table 4.11.: Have Participants undergone their own Cognitive Assessment?

Answer	*Number*	*Percentage*
Yes	11	30%
No	23	55%
Unspecified	6	15%
Total	40	100%

Table 4.12.: If not, do they feel it would have benefitted them?

Answer	*Number (N=23)*	*Percentage*
Yes	8	34.78%
No	15	65.22%
Total	23	100%

Table 4.13.: Have Participants consulted with a Psychologist before?

Answer	*Number*	*Percentage*
Yes	15	37.5%
No	19	47.5%
Unspecified	6	15
Total	40	100

4.4. Analysis of Open-Ended Questions

In terms of the responses offered for the open-ended questions, thematic content analysis was used as the method of data analysis. The effectiveness of thematic content analysis rests in its focus on identifying underlying patterns or themes in collected data (Braun & Clarke, 2006). Thematic content analysis, according to Braun and Clarke (2006), involves six phases. These six phases were used during the course of this study to come to a conclusion regarding the patterns that underlie the data collected.

4.4.1. Familiarisation

The first phase of the data analysis stage was immersion in the data which had been collection so as to explore the nature of what it is that the participants have offered to the study (Braun & Clarke, 2006). In terms of this research, the data collected from parents featured a variety of diverse views which needed a significant amount of reading and exploration. While reading through the results of the surveys returned, the researcher was able to identify a number of themes related to both the primary and secondary questions on which this study is based. These themes included:

1. Difficult relationships between parents and educators
2. Reliance on the school
3. Unfair labelling of a child
4. Disagreements with the nature and outcome of the assessments
5. The accessibility of the assessments and their language
6. The cultural bias of the assessment
7. The need to clarify the nature and purpose of the assessments

4.4.2. Generation of Codes

With the data having been explored during the familiarisation phase, a number of themes were identified and uncovered. At the second phase, codes were developed from these themes, which allowed for the data to be explored and conceptualised in a more organised way (Braun & Clarke, 2006). In terms of the data which the researcher collected, codes were generated for each question requiring for or allowing an open-ended response. The codes used in the analysis of this data were built around the identified themes. As such, the codes included:

1. Language
2. Norms
3. Schools
4. Referrals

5. Labels
6. Culture
7. Bias
8. Assessment procedure
9. Accessibility
10. Affordability
11. Purpose
12. Relevance

With the use of these codes, further data pertaining to the broad nature of the data could be identified, allowing for the identification of possible themes.

4.4.3. Searching for Themes in the Data

Once the codes have been conceptualised in the second phase, the data was then re- examined, and applied to these codes (Braun & Clarke, 2006).

The themes which emerged during this phase were conceptualised as:

1. Poor relations between parents and educators
2. Reliance on the school to determine the needs of their learners
3. The desire for parents to understand and support their children
4. The potential for labelling a child unfairly
5. Parents' experiences with career assessments and psychotherapy
6. Helpful suggestions and recommendations from assessments
7. Disagreements with assessments
8. The affordability of the assessment
9. The language use of the assessments
10. The accessibility and personality of the practitioner
11. The cultural bias of the assessment
12. The need to meet the children at their level They need a greater appreciation of the children with which they work
13. The need to contextualise the assessment

14. The need to clarify the purpose of the assessment

4.4.4. Revision and Refinement of Themes

Once the themes had been well established and a pattern began to emerge, the themes which had been identified were cut so as to only include those which fit with the emerging pattern. At this point, the themes identified in the previous phase were edited and organised into primary and secondary themes (Braun & Clarke, 2006).

Primary themes

Primary themes, in terms of this research, are those which appeared most often in the responses of the participants along with those which are most relevant in terms of the focus of the assessment.

1. The applicability of cognitive assessments in the South African context
2. Supportive, Therapeutic and Containing Relationship between Practitioner and Child
3. Predictive Efficacy of the Assessment
4. Logistical Accessibility of Assessments
5. The use of Outdated and Old-Fashioned Language
6. Social Stigma Applied to Psychotherapy and Psychoeducational Assessments

Secondary themes

The secondary themes of this research are those which may have appeared frequently among the responses given by the participants, but which do not speak directly to the focus of the research. These themes provide something of a background to the opinions of the primary themes in terms of giving these themes a greater depth.

1. The relationship between the parents and the school
2. The influence of parents' psychotherapeutic experiences
3. The inherent desire of parents to support their children

4.4.5. Naming and Definition of Themes

At the phase, once the themes had been revised and refined, the patterns that have been established and the themes which remain that link to these patterns were formally named and defined (Braun & Clarke, 2006).

4.4.5.1. The Applicability of Cognitive Assessments in the South African Context

According to the responses to question 27 of the questionnaire (See Appendix A), 12 of participants raised concerns as to the applicability of the assessments in terms of culture, socioeconomic status, and language. It was opined by one of the participants that the assessments were relevant only to children from an educated, middle class family; there were also concerns regarding the availability of assessment instruments in languages other than English. One of the participants described his own experience with a cognitive assessment measure where the practitioner who had conducted the assessment, discussed the fact that the activities used in the assessment were geared more towards western cultural practices and excluded those of stereotypical African children.

4.4.5.2. Relationship Between Practitioner and Child

The supportive and containing element of the assessment was also cause for concern for 7 participants, based on their responses to question 29 of the questionnaire (See Appendix A). These participants felt that the assessment was too cold and too clinical. Along with the outdated language used in assessment measures, it was found that the practitioner also had an impact on the ability of the child to engage comfortably with the assessment. Participants describe the relationship between the practitioner and the child as being overly professional and insist that it would benefit from a more relaxed tone, with more effort made to break the ice and put the child at ease. The same was said of the relationship between the practitioner and the parents of the child, particularly when it comes to the provision of feedback which is also seen to be too clinical and lacking in transparency. Some of the participants suggested including some

fun, non-assessment related, activities or games in the assessment which could serve to break the ice and ease the anxiety which the child might be experiencing. It was also suggested that the assessments might be broken down into smaller chunks so as to make them more manageable for children.

4.4.5.3. Predictive Efficacy of Assessments

Participants voiced concerns around the predictive efficacy of cognitive assessments, or the ability of these assessments to actually predict future academic achievement. This was linked, by the participants, to the issue of cultural applicability of cognitive assessments. Participants argued that assessments do not offer a fair representation of children, particularly those not of a western background. It speaks to a need for cognitive assessments in general to be re-evaluated in terms of their utility in the South African context. For five of the participants, the danger of applying labels to young children, such as those related to their level of cognitive development, is exacerbated by assessments they may identify as invalid.

4.4.5.4. The Logistical Accessibility of Assessments

The availability of the assessment, as opposed to the accessibility of the assessment, was another issue which the participants raised. There was concern that the cost of the assessments might be prohibitively high, putting the assessment services out of the reach of parents not of a middle-class background. Linked to this was a suggestion among the participants that psychotherapeutic and assessment services be made available on all school campuses so that parents of all economic backgrounds might be able to access them.

4.4.5.5. Outdated Language Use in Assessments

When discussing this theme, parents referred to the effectiveness of the cognitive assessments in terms of the structure of the assessment and the language that it used. As examples, one respondent implied that the terminology used in the assessment might have been out of reach for his child who was being assessed,

based on their academic level. One respondent simply insisted that the language used was outdated. Concerns were raised that the vague nature of the language used in these assessments could have an impact on the children's responses to questions posed and the eventual outcome of the assessment process. It was also argued that the language used, along with the related assessments, were old fashioned, outdated and would be very difficult for contemporary children to relate to and work with and this will also have an impact on the outcomes of these assessments.

4.4.5.6. Social Stigma Associated with Psychological Interventions

One of the concerns which parents raised in their responses was a fear of children being labelled by the conclusion of an assessment. There is a feeling among participants that children will feel judged by the practitioner and will be judged as a result of having been assessed by educators and peers with the label and the resulting judgment following them throughout their lives. This fear of stigma seems to cause further hesitation in parents in terms of making the decision to have their children assessed. This feeds into the inherent desire of parents to support their children which was another theme which arose during the course of this research. This support was discussed in relation to parents wanting to have their children assessed but, in this case, it can be discussed in terms of keeping their children safe from possible stigma.

4.4.5.7. Supportive Relationship between Parents, Practitioner and School

A secondary theme which emerged through the completed surveys included the relationship which the participants had with both the practitioner and the school. The participants came across as feeling that their child's practitioner was too cold, too professional, not transparent enough and not sympathetic enough to the inherent diversity of the children which they assess with respect to their sociocultural background and their character. There was also an underlying theme of mistrust which the participants had for their children's educators. There was a feeling that the educators used the recommendation of a cognitive assessment as a means to pass off responsibility for the child's difficulties on an inherent difficulty along with a feeling that the educators would apply cognitive labels to their children which would compromise their

relationship with them. There is also an underlying feeling that schools pass off responsibility for the child's wellbeing onto an external psychotherapist for which the parents would need to foot the bill.

4.4.5.8. The Influence of Parents' Personal Experiences with Psychological Services

The experiences which the participants have had with psychological interventions might have had an impact on their feelings around the assessment of their children. Most of the assessment experiences which participants have had with assessments included career assessment measures, which they found to be beneficial. Many of the participants also felt that they would have benefitted from having received something along the lines of the psycho-educational assessments which their children had received. Many of the participants had also had experiences with therapy for a variety of emotional problems and largely felt that these experiences had been beneficial to them.

4.4.5.9. Parents' Desire to Support their Children

Despite the underlying feeling of mistrust which many of the participants had for their children's educators and practitioners, there was a definite feeling of concern which the participants had for their children which was manifested in a clear lack of hesitation which most of them had when it came to having their children assessed in the event that they received a referral. three of the respondents, based on their responses to question 13 (See Appendix A), on top of receiving a referral or having an assessment carried out might also feel that they need a second opinion in terms of their child's cognitive functioning.

4.4.6. Final Write-Up

This is the final phase of a thematic content analysis where links are made between the themes and the patterns and a final discussion and write up is conducted (Braun & Clarke, 2006). In this write up, we integrate the themes identified in the

previous phases and establish an understanding of cognitive assessments from the perspective of the participants. These themes will be discussed in relation to existing literature whereby parents' perceptions of the strengths and limitations of cognitive assessment measures are established.

4.5. Validity

Validity is central to research and refers to whether or not the conclusions attained from collected data can be referred to as meaningful or whether the research has measured what it set out to measure (Drost, 2011). The validity of this research would depend on whether or not it was able to explore and describe the perceptions of parents towards cognitive assessment measures. The most important type of validity, when it comes to this research, is external validity. External validity refers to the ability to generalise the results of this research across populations and settings (Drost, 2011). External validity was compromised by the limited number of participants in this research. The sample which did participate lacked a degree of diversity in terms of gender, ethnic background, and income bracket and as such, there were limitations in terms of the researcher's ability to explore perceptions from a diverse range of perspectives. The limitations of the sample may challenge the external validity of this research. This indicates that there is scope for further research in this area with a wider and more representative sample.

4.6. Reflexivity

Reflexivity is a central issue in research, particularly that involving qualitative measures such as those used here. Reflexivity refers to the role which the researcher plays in the research and the extent to which they form an objective presence. Specifically, reflexivity involves an exploration of the role which the researcher plays in the outcomes of their research through subjective influences (Finlay, 2002). Reflexivity is especially important when it comes to defining constructs to be used when conducting research with a focus on demographic differences, particularly as it relates to a power dynamic between the researcher and the sample (Finlay, 2002).

This research did not involve direct interaction between the researcher and the sample as might be found in an interview or ethnographic research, but it can be argued that the subjectivity of the researcher played something of a role in the outcome of this research and this was made more evident as the sample emerged as being as limited as it was. Going into this research, there was an expectation that the sample would be more diverse in terms of ethnic, cultural, and socioeconomic background. This expectation affected the literature review which contextualised the research as it was based very much in background literature that focussed on the relationship between psychological practice and populations of a non- western background in terms of the relevance of the practice to these populations. Accordingly, the survey which was used for data collection directed its focus with the expectation that cultural differences would be the central theme of the results.

While the cultural differences did form a meaningful part of the results of this data, equally apparent themes coming out in the data were those related to the relationship between parents and both practitioners and their children's educators and school. Another significant theme emerging from this theory was also the need for a more containing and therapeutic relationship between the practitioner and the child which is not so cold and aloof. These themes are central to the results of this research and are not confined to the experiences of a particular cultural, ethnic, or socioeconomic group. With a more objective approach to the instrument, there would have been an opportunity for more areas around assessment, not necessarily related to sociocultural experiences, to have been explored by participants in a more direct, as opposed to open-ended way.

4.7. Discussion of Results

When discussing the results of this research, it would be important to reintroduce the themes emerging from the data and explore them at a deeper level. In doing so, the primary themes will be explored first, followed by the secondary themes.

4.7.1. Primary Themes

When referring to primary themes in the context of this research, we are making reference to the themes which appeared most frequently in the data, along with those themes most pertinent to the aims of the research.

4.7.1.1. Cognitive Assessment within the South African Context

4.7.1.1.1. Cultural Applicability of Cognitive Assessments

Cultural applicability of assessments is a theme which came through in the research despite the sample being so limited in terms of demographic diversity. Cultural applicability of assessments has been found to be central to the discourse around assessments worldwide (Van De Vijver & Tanzer, 2004). One respondent offered her experiences with cognitive assessment measures and noted the role which culture played in the following comment:

"However I am a white English speaking South African. When I applied for marketing director roles I had to do various assessments and the person who interviewed me passed a really interesting comment - he mentioned he'd never seen anyone solve the puzzles so quickly and I replied that I did thousands of puzzles as a kid and he said a lot of black children have never done puzzles growing up and really struggle with those particular tests."

(Mother of three primary school learners)

Van de Vijver and Tanzer (2004) explored the applicability of assessments as they are used internationally and concluded that there are three areas of cultural bias in cognitive assessments. The first area is construct bias. This is a problem with testing where the definitions used, and skills measured during the assessment fail to translate from one culture to another and thereby fail to fairly test each participant fairly. The second area is method bias, which is concerned with global differences in testing samples from which intelligence norms are taken as well as differences in the environmental factors of administration including the skill and language level of both the child and practitioner. The third area is item bias which involves the ineffective

translation of instructions from one culture to another, particularly instructions and items which are specific to the culture in which the assessment originated (Van de Vijver & Tanzer, 2004). The mother in the preceding comment described what Van de Vijver and Tanzer (2004) would consider to be culture bias, with the puzzles described failing to translate between a stereotypical European culture and a stereotypical African culture.

Bracken and Barona (1991) conducted research which makes use of immigrant children in the United States as examples of a need to understand the background of the child being assessed so as to develop a rich understanding of the client. This background included why it was that the child immigrated, what kind of life they had before they immigrated, what their level of education is and how their culture and belief systems have influenced them (Bracken & Barona, 1991). This can be applied to the case offered by one of the participants which centred on a child from a rural area in Kwazulu-Natal whose assessment result failed to predict his high school achievement. An attempt at understanding his background and how this might affect his response to the assessment would have possibly mitigated the outcome of the assessment as it indicated his cognitive ability. This might have improved the predictive validity of the assessment when it came to his school achievement.

The preceding quote also refers to the issue of predictive validity. The predictive validity of cognitive assessment measures refers, in the context of this research and its results particularly, to the ability of the measure to determine the extent to which a child will succeed in an academic context. Research has indicated that there is a discrepancy between the cognitive skills required to perform well in a cognitive assessment measure and the cognitive skills required to achieve in the classroom. This discrepancy is due to a difference between practical intellectual skills and academic intellectual skills (Sternberg, Grigorenko, & Bundy, 2001). While the predictive validity of the tests can therefore be questioned as it relates to future academic achievement, performance on cognitive assessment measures is found to predict achievement or competence in everyday life where practical skills are more relevant (Sternberg et al., 2001).

Concerns around cultural inclusivity in cognitive assessment measures were reaffirmed in the following comment:

"If by culture you mean educated, middle-class."

(Mother of a Grade 8 learner)

Cognitive assessments in South Africa have been lean in terms of cultural inclusion and as such, assessments remain largely irrelevant to the portion of the population not of a European background. One of the reasons behind this lack of development is the absence of capacity to develop new psychometric assessments (Foxcroft, 2004). Additionally, with the current widely used assessment models being so culturally exclusive, it would be very difficult to norm the tests on a culturally diverse sample. It would further be very difficult to adapt the assessment measures to establish a more inclusive and less biased test as the world population comprises so many diverse cultures which would necessitate their own culturally sensitive language and norms (Stichweh, 2007). Shuttleworth and Edwards (2017) explored the efficacy of nationwide norms for intelligence particularly as it pertains to South Africa. Due to the diversity of the South African population, particularly with regards to language and educational backgrounds, they concluded that population-based norms should be considered obsolete as unrepresentative (Shuttleworth & Edwards, 2017). This speaks to a need to consider the heterogeneity of the South African population when developing a more culturally and socially fair instrument of cognitive assessment.

One might look readily to an intervention which includes adapting cognitive assessments to meet the cultural background of the populace. When it comes to the improvement of cultural inclusivity in cognitive assessments, however, one would be faced with very much the same challenges which this theme discusses. Cognitive assessments measure an individual's academic potential based on their scores on a variety of subtests (Keith, Fine, Taub, Reynolds, & Kranzler, 2006). It has been established that these subtests are limited by a significant degree of bias in terms of the language used, the nature of the administration and the types of tests used (Van de Vijver & Tanzer, 2004).

4.7.1.1.2. The Use of Language in Cognitive Assessment Measures

The use of language in cognitive assessments is once again raised, with the central problem in this theme is that the language used by most practitioners is English, which the participants felt was not applicable to many children in the country to whom English is not a first language. It is also a concern of some parents, related to this theme, that the activities used during the course of the assessment are geared more towards white than black children, which gives a stereotypical white child an advantage when it comes to the tests involving these activities, such as puzzles.

Language, according to Foxcroft et al. (2004), is closely related to the cultural background of the child. This is due to the issue of interpretation. Many of the participants felt that the language of the assessment was too vague and open to interpretation to allow for an objective reading of the child's cognitive ability. This is particularly so in a multicultural milieu with a diversity of home languages. It is suggested that tests be translated into the first language of the child being assessed (Foxcroft et al., 2004). For some learners, even those from a home environment where English is not a first language, exposure to the language at schools where English is a medium of instruction can be effective in establishing adequate English proficiency. For learners who have been exposed to English for a period of seven years, adequate proficiency in this language can be expected (de Wet, 2002)**.** The challenges resulting from medium of assessment is described in the following quote:

"I once took our driver's son to a high school readiness assessment - he was from rural KZN and was applying for a Jhb boarding school and he wrote a standard test along with all the boys who were attending independent primary schools. The language was inaccessible and out of touch for his needs. Despite doing dismally in te (sic) ***assessment he got into the school and has flourished and will write matric next year with 4 As in Grade 11. He is at one of the top schools in the country".***

(Mother of two primary school learners)

This quote refers to both the issue of language barriers being a compromising factor or nuisance variable in cognitive assessments when it comes to children not from an English background. It also speaks to the problem of predictive validity of the assessments when applied to some children. This validity relates to the ability of the assessment to predict future academic achievement. While this quote speaks to the experience of a child from a rural background, it does bring into question the validity of the assessments for all children.

Bracken and Barona (1991) investigated the engagement of non-English speaking children with cognitive assessment measures and found that language use in cross cultural research is central to the efficacy of assessments when used with children not fluent in the language of assessment. The research indicates that it is essential for the examiner to be fluent in the first language of the child they are assessing (Bracken & Barona, 1991). Duarte and Rossier (2008) investigated the state of language adaptation and cognitive assessments and found that translation is not as simple as it seems. They found that tests could not be separated from the sociocultural context in which the test was developed. Investigations into adapted tests found that translations of constructs used in an assessment could not be effectively or accurately adapted into another language without losing the initial meaning of the construct (Duarte & Rossier, 2008). Ndlovu (2012) conducted an exploration of the translatability of concepts used on the Junior South African Intelligence Scale. In reference to the Absurdities subtest, items such as a boat on the water, with sails and steam blowing in opposite directions, along with the use of a knife and fork as eating utensils, were found by the researcher to be culturally biased and not easily translatable into an African language (Ndlovu, 2012).

4.7.1.1.3. A Cognitive Assessment for South Africa

One respondent indicated an awareness of the role which culture plays in assessment:

"I do believe that cultural experience and life should be taken into account"
(mother of a primary school learner)

The previous comment, as well as the following one, seem to offer a somewhat idealistic indication as to how parents feel cognitive assessments can be adapted to move forward in South African society:

"Go out and research the youths (sic) ***attitudes, beliefs, values, emotions and mindsets in different areas and economic circumstances."***

(Mother of two primary school learners)

Adapting a test to a non-Western community, according to Transler, Sukumar, and Rao (2008), can and should involve a process of adaptation, which involves more than simply a direct translation of the measures as they were developed in the West. Adaptation should involve a process of adoption and assembly depending on the purpose of the assessment in the context of the non-western culture. Adoption involves a process of directly translating western measurement items into the vernacular; adoption is used when there is a need to compare cognitive strengths and weaknesses across cultures. Assembly on the other hand, involves a process of developing a new measure which is not subject to cultural bias and compromises the sociocultural context in question (Transler et al., 2008). Adapting a non- Western test should use both processes of adoption and assembly, according to Transler et al. (2008), with adoption being used when the Western item can be applied without compromising the culture in question and assembly being used when a new and more appropriate item is needed.

There has been some endeavour in terms of developing a cognitive assessment which can be applied fairly to the South African context which focusses more on Transler et al.'s (2008) ideas of both adoption and assembly. The South African Wechsler Adult Intelligence Scale (SAWAIS) indicates that there have been attempts to establish a cognitive assessment relevant to the South African context in spite of the concerns raised by Grieve and Van Eeden (2010) and Swanepoel and Krüger (2011). Foxcroft (2004) explored the potential of a fair cognitive assessment in multicultural South Africa and concluded that a South African cognitive assessment should provide a measure of intelligence while respecting the influence of culture on the perceptions of the test takers. This means a possible South African cognitive assessment should

incorporate cultural elements exclusive to individual South African groups as well as those shared by all South Africans (Foxcroft, 2004).

Language has proven to be a significant challenge in South African cognitive assessments. Following conclusions that the South African Weschler Adult Intelligence Scale (SAWAIS) was outdated, attempts were initiated in 1997 to adapt the WAIS-III for the English-speaking South African populace (Foxcroft & Aston, 2006). While the South African constitution supports multilingualism in society, including in education, English continues to dominate along with Afrikaans to a lesser extent (Mkhize & Balfour, 2017). The result of this dominance, according to Mkhize and Balfour (2017) is that students struggle to develop the ability to understand complex concepts in multiple languages, which may include English.

Language is found to have a significant impact on the ability of the test taker to engage effectively with the cognitive measures such as those developed by Wechsler. For children who do not speak English as a first language, there is difficulty in grappling with the terms used in the assessment which can have a very negative impact on their scores (Foxcroft & Aston, 2006). An investigation of the performance of Afrikaans test takers on the WAIS-II measured the degree to which the translated instructions were effective in terms of improving their engagement with the assessment. This study concluded that the Afrikaans translations did indeed improve engagement with the assessments (Grieve & Van Eeden, 2010). Grieve and Van Eeden (2010) found that it was easier to introduce valid translations for Afrikaans than for an African language due to shared cultural backgrounds between English and Afrikaans. Translation into the Afrikaans language was compromised nonetheless by a lack of direct correlation between terms. In English, the item “repair” is used to refer to the act of restoration, while in Afrikaans “herstel” is the comparative term but is also used to refer to recovery from illness. This was found by Grieve and Van Eeden (2010), to have complicated the scoring of the WAIS-III vocabulary test in the undertaking of their research.

4.7.1.2. Supportive, Therapeutic and Containing Relationship between Practitioner and Child

This theme emerged throughout the data and is somewhat unique among themes in that it is one of the few themes not related to sociocultural differences and the accessibility of assessments to children of non-western cultures. This theme is related, largely to the assessment space as supportive, therapeutic, and containing. Participants felt that the assessment space was too clinical with practitioners being too aloof and professional that they fail to establish a warm and positive relationship with the child.

When elaborating on this idea of the assessment space being too formal and too aloof, the participants discussed the importance of understanding the unique individuality of the child and the resulting need for the practitioner to modify their approach to create an ideal space for each child where their unique needs can be met. This was exemplified in the following comment:

"All the people who assess the kids tend to try to be so aloof and professional instead of trying to create a relaxed and more normal environment. I challenged the first one we went to and asked her why she told me not to prep my child and why she didn't try to make him more relaxed. Her response was that this way everyone can be assessed in a more comparative manner! Absolute nonsense - all children have different personalities and some need to be prepared more than others…"

(Mother of three primary school learners)

This quote covers the important point of creating a more relaxed environment where the child will, likely, feel contained and supported and will not be as intimidated by the experience as they might be in a more formal environment. This quote also speaks to the need for understanding a child's individuality, more specifically discussing the fact that each child differs in terms of their educational and assessment needs which compromise the validity of the assessment.

The anxiety associated with children completing a cognitive assessment can have a very negative impact on their performance on the assessment if not adequately

managed. A study conducted by Eysenck, Derakshan, Santos, and Calvo (2007) revealed that anxiety has an adverse effect on an individual's goal directed attention which results in the individual failing to censor impulsive responses, struggling with increased distractibility and struggling with dual tasks and task switching. It would stand to reason, therefore, that for a representative outcome to be attained from a psychoeducational assessment, that an anxiety reducing environment be developed for the child. The relationship between the child and the practitioner can be central to the development of this environment. The Wechsler Intelligence Scale for Children – Fourth Edition (WISC-IV) does encourage a degree of rapport building whereby the practitioner is able to make the assessment and the space more comfortable and less intimidating for the child (Wechsler, 2003). These include engaging a child with a toy if they appear to be hesitant or discussing the room with them. This engagement is however time limited (Wechsler, 2003).

Mercer and Reynolds (2002) conducted research on the experiences which individuals have with regards to the encounter with practitioners within the healthcare setting. Mercer and Reynolds (2002) centred their discussion around the issue of empathy in clinical encounters and the lack thereof. It is found that empathy in the relationship between patient and practitioner is central to the establishment of a positive and effective therapeutic relationship. Empathic nurses are even found to reduce depression, anxiety and hostility in individuals receiving treatment for cancer. Empathy, generally speaking, improves communication between the practitioner and the patient and helps the practitioner develop a clearer understanding of the patient and their needs. Empathy also helps the patient cope with the difficulties they are facing and helps to resolve their difficulties (Mercer & Reynolds, 2002).

When it comes to the promotion of empathy in the clinical relationship, there are a number of broad approaches which can be employed. Garden (2009) discusses the approach of expressing an understanding and appreciation of the patient's experiences and their feeling around them while also opening up the space for the client to work with the practitioner on this understanding to ensure that it is accurate. Garden (2009) also discusses the relationship client care model which effectively conceptualises this model. This model positions the patient as the expert and compels the practitioner to learn from

them to develop an understanding of their experiences, their difficulties and their perceptions around the nature and efficacy of the treatment they are receiving (Garden, 2009). In terms of cognitive assessment measures, this model opens the practitioner up to the necessity of developing rapport with the client they are assessing, to the extent that they recognise the child's challenges both inside and outside the assessment space. Having understood the child's difficulties with the assessment, a practitioner can focus more on those subtests with which they struggle. Having understood the child's difficulties outside the assessment, the practitioner is better able to interpret a child's performance on the measure and focus their recommended intervention

The same respondent continues, adding her concerns around the serious way in which assessments are carried out:

"Try not to have dark, gloomy offices with poor lighting. Make the rooms fun with toys and games and think through how you want your interaction with the kids and the parents to be - take control of this interaction. Neither the parents, nor the children want a gloomy, boring, overly formal experience. The poor kids and adults who have to spend two entire mornings in a poorly lit room where a controlling person is giving them tests. Do star jumps and exercises in between. Have different sections in your rooms and move the kids from one station to the next - 2 full mornings at the same little desk in a poorly lit room with a practitioner who makes no effort to get you to like them because they want to keep the results comparable - no wonder so few kids want to go back! Reward the kids and let them choose a toy or a sweet for spending so much time in your offices."

(Mother of three primary school learners)

This quote offers suggestions in how to develop a more supportive and containing assessment space where the child is not overburdened or overwhelmed by the experience. This participant does not offer much in terms of supporting the children as individuals with unique needs, but it does offer some discussion on making the experience more manageable, essentially by introducing fun activities to lighten the mood and create a more enjoyable environment, introducing physical activities to keep the children energised and breaking the assessments up further to avoid the children

being drained by assessments which last what the participants feel to be an unreasonable amount of time.

Beaty-O'Ferrall, Green, and Hanna (2010) spoke about the need for educators to employ relational strategies with difficult learners in classrooms. Their discussion revolves around classroom work but can be applied to what the participants have described as being an overly aloof and clinical testing environment. It is argued that the relationship between the educator and the learner is more important than policy when it comes to academic achievement. In the same way, the participants above indicate that a relaxed environment and a positive relationship between practitioner and child should take precedent when cognitive assessment measures are administered. This research offers something of a link to that of Bracken and Barona (1991) when it comes to its emphasis on the importance of understanding the child at a level which is deeper than academic and integrates an appreciation of the unique qualities of the learner along with an understanding of their background (Beaty-O'Ferrall et al., 2010).

Beaty-O'Ferrall et al. (2010) discussed a variety of strategies which educators can use to develop relationships with learners. These strategies include making time to bond with the child, avoid making use of disciplinary measures and making use of activities which allow for the learner to grow. It would not fall to the practitioner, typically, to make use of any disciplinary measures, but in this spirit it would be important for practitioners to employ a degree of understanding and empathy when working with children in the assessment space and avoid making the child feel judged. Developing a bond with the child is something that can be very easily transferred to the assessment space and is a practice with which all practitioners can engage. Spending some time to get to know the child and put them at ease will likely improve the objectivity of the assessment by reducing the effects of anxiety which the child might otherwise have experienced. Making use of activities to improve the growth of the learner speaks more to the efficacy of the assessment as a whole in terms of its applicability to each individual learner, but it might be beneficial for non-assessment activities to be introduced which allow for the learner to ease their anxiety and bond

with their practitioner if not to allow them to warm up for the assessment (Beaty-O'Ferrall et al., 2010) .

Garden (2009) does not describe empathy in clinical practice as being without complications or challenges. A challenge which is discussed is that of affinity; the degree to which the practitioner sees the patient as similar to themselves. This affinity allows the practitioner do develop a greater degree of empathy for the client. In a country as diverse as South Africa, it is likely if not almost certain that practitioners will engage with patients of a different background to themselves. These differences might, according to Garden (2009), have a negative impact on the degree of empathy which the practitioner will offer and make apparent to the patient.

The idea of improving the relationship between the practitioner and the child is complicated by the fact that commonly used cognitive assessments are accompanied by a very specific set of administrative guidelines which dictate the manner in which the practitioner engages with both the test and the child (Wechsler, 2003). Among the guidelines of the WISC-IV is to complete the assessment as quickly as possible without delays; this would likely compromise the ability of the practitioner to engage in lengthy rapport building with the child. While the guidelines encourage the practitioner to demonstrate enthusiasm and encourage the child to a limited degree, it is insisted that these efforts do not reach the level of reinforcing the child's performance (Wechsler, 2003).

The WISC cannot be said to be completely rigid in this regard, however, and it is evident within the administrative guidelines that attempts are made to ensure that the measure is as accessible as possible (Weschler, 2003). While the WISC-IV does endeavour to expedite the assessment process to as great a degree as possible, it does encourage the practitioner to engage with the child to support them through the subtests. Subtests on the Verbal Comprehension Index encourage the practitioner to repeat or paraphrase instructions and concepts to the extent that the child is able to understand what it is that is being asked of them and what concepts it is that they are working with. The Letter Number Sequencing Subtest in particular offers numerous opportunities and encourages the practitioner to repeat and paraphrase the instructions. The Arithmetic

subtest, despite effectively being a measurement of working memory, also encourages the repeating of items (Weschler, 2003).

4.7.1.3. Predictive Efficacy of Assessments

4.7.1.3.1 The Predictive Validity of Cognitive Assessments

It would be important to reintroduce a testimony offered by one of the participants who discussed the significance of the medium of assessment. These challenges go beyond the extent to which the child is able to engage with the assessment and challenge the extent to which the assessment is able to predict potential:

"I once took our driver's son to a high school readiness assessment… Despite doing dismally in the assessment he got into the school and has flourished and will write matric next year with 4 As in Grade 11. He is at one of the top schools in the country"
(Mother of two primary school learners)

The efficacy of the assessments was a theme which emerged from the data and seems to refer to a problem which cognitive assessments have in terms of establishing an accurate profile of a child with regards to their academic potential. The issues of language use and cultural bias in the assessments has been established in previous themes, but the efficacy of assessments goes beyond these two issues. The feeling that the assessment did not paint a broad enough picture of the child was shared by a variety of participants, with one participant, whose quote is shared below, believing that there is room to explore the child at a deeper level, specifically in such areas as curiosity and resilience. One respondent described a need to broaden the parameters of assessments in the following comment:

"I would like to understand if there are other tests that could be done to measure qualities / characteristics such as resilience, determination, curiosity and creativeness (if not already tested)"
(Father of primary school learner)

One might argue that these parents are referring to a need to explore emotional intelligence as a means to broaden the profiles which cognitive assessments develop of children. Emotional intelligence can be broadly defined according to a four-branch model. These branches include the ability to perceive one's emotions, the ability to make use of these emotions, making use of these emotions to facilitate thought, understanding these emotions, and managing emotions in a way that growth is facilitated. Of these branches, it is argued that the ability to understand one's emotions is the most highly correlated to cognitive ability, particularly with regards to abstract reasoning (Mayer, Salovey, Caruso, & Sitarenios, 2001).

Emotional intelligence has been found to be a strong predictor of future academic success, with many of the factors and variables included in an emotional intelligence measure being linked to varying areas of achievement. The areas explored with relation to emotional intelligence included intrapersonal skills, interpersonal skills, stress management and adaptability (Parker et al., 2004). The sample studied in this research were measured according to these EQ areas and their percentile as it relates to academic achievement. Those of the sample who achieved at the top percentile were also found to score highly on measures of interpersonal ability, stress management and adaptability (Parker et al., 2004). This might offer an argument for the inclusion of a more comprehensive exploration of emotional intelligence to cognitive assessment measures so as to better inform the practitioner when it comes to interpreting the results and putting together a set of recommendations.

Research in terms of the efficacy of cognitive assessments focus heavily on the need to contextualise cognitive measures and their outcomes within the cultural background of the child being assessed. Sparrow and Davis (2000) conclude the discussion of their research by placing emphasis on the need for assessments to be contextualised within the norms and demands of the culture of the child being assessed. This research ultimately discusses the need for greater depth when it comes to the interpretation of cognitive assessment measures so as to develop a greater understanding of why it is that the practitioner has arrived at these outcomes and how this understanding can play a role in developing an appropriate intervention (Sparrow & Davis, 2000). The second quote, as it relates to a need to explore such factors as

resilience, determination, and curiosity, implies a need for an investigation into the more emotional realm of a child's functioning, introducing the concept of emotional intelligence.

As an exploration of a counterargument, this study found that Canivez, Watkins, James, Good, and James (2014) investigated the ability of the Wechsler Intelligence Scale for Children (WISC) to predict scores on both the second and third editions of the Wechsler Individual Achievement Test (WIAT), which measures an individual's abilities in terms of academic competencies. The study found that an individual's FSIQ as established by the WISC-IV is a statistically accurate predictor of both the mathematics and reading composites of the WIAT (Canivez et al., 2014). Further research has been conducted which established the WISC-III as an effective tool through which future academic achievement is predicted even in cases where there is significant variability in terms of scores (Freberg, Vandiver, Watkins, & Canivez, 2008). Freberg et al. (2008) also found that the FSIQ was the only significant or accurate measure of academic achievement when it comes to Maths and English. Glutting, Watkins, Konold, and McDermott (2006) however, found that while the WISC-IV does provide a reasonably accurate predictor of scholastic achievement in reading and mathematics, the index scores do not. It is found that there is a significant amount of variance on the subtests of the indexes which make them unreliable measures when it comes to establishing a valid profile of the child in question (Glutting et al., 2006). It must however be mentioned that this research was done on children from the same context in these assessment measures were development and thus, we cannot say with certainty that the same would be true for South African children.

When considering the validity of cognitive assessment measures in the South African context, it is important to establish the degree to which Western measures of cognition can be applied to a non-Western populace. Cockcroft et al. (2015) found that South African test takers were met with a number of barriers to effective and fair engagement with cognitive assessment measures. Among these barriers are the degree of proficiency in English as a home language, limited or low-quality education which limits the degree of exposure to necessary academic concepts and low socioeconomic status (Cockcroft., 2015).

4.7.1.3.2. Assessment and Labelling at a Young Age

One of the respondents raised concerns over the significance of age when it comes to assessments in the following comment:

"Maybe in later years but I think it gives teachers a preconceived idea of the child without experiencing them for themselves. Children are multi-faceted and should be seen in the whole not just in one area."

(Mother of two primary school learners)

The quote introduces the idea that a child cannot be assessed at too young an age, with the idea being that it might take them a little while to find their feet in a school environment. The quote also discusses the limitations of cognitive measurements in developing a rich assessment of a child. These limitations are linked to a concern that educators will apply an intellectual label to the child, which is more damaging at a young age, which may well have a negative impact on the relationship which the child has with the educator in the classroom.

These feelings against early identification of children, in terms of children's cognitive development, appear to be anecdotal. Evidence based on research conducted by Anderson et al. (2003) indicated that early interventions were very beneficial to cognitive development when applied to children. Early interventions are found to decrease the rate of grade repetition and referrals to special education services. What was central to these early interventions was early identification allowed for by the children's engagement with cognitive assessment measures (Anderson et al., 2003).

However, the risk with assessments at a young age ties with the risk of applying a label of intellectual capability to the child at too young an age, which is exacerbated by the Flynn effect. This postulates that a variance in test scores can be expected over a period of time. The WISC-IV showed a decrease in test scores among children who were enrolled in special education schools based on their results in an initial test. This speaks to a need for caution in applying labels to children based on their performance on cognitive tests and applying subsequent labels (Watkins & Smith, 2013). In the

United States, a study was conducted on the African American community which investigated the danger of applying labels. The argument of this study was that the home culture of this community did not correspond with the mainstream school culture and as such, the act of labelling can often be an ignorant one (Gold & Richards, 2012). Gold and Richards (2012) believed that the labels applied to these children do not so much provide an indication of their academic competence but rather a condemnation of their inability to conform to a culture with which they might not be inherently familiar (Gold & Richards, 2012). A study on the application of labels to children on the autism spectrum conducted by Nader, Courchesne, Dawson, and Soulières (2016), found that the intelligence of children diagnosed with autism is often underestimated by the WISC-IV, particularly those children with specific speech and language deficits. This study, specifically, found that there were differences in the conclusions between the WISC-IV and Raven's Progressive Matrices, which speaks to the issue of consensus between measures and the ability of these measures to provide an accurate and conclusive label or diagnosis to the child (Nader, Courchesne, Dawson, & Soulières, 2016).

4.7.1.4. The Logistical Accessibility of Assessments

The availability of assessments, in terms of the themes originating from this data, refers to the issue which many of the participants have in terms of their ability to access the assessments from a financial or logistical perspective. When asked if there were any factors which might prohibit parents from having their children assessed, a factor which was raised was that of the cost of the assessment. The participant related this specifically to the factor of one's medical aid and whether or not it would be able to cover the costs of the assessments. This speaks to the theme of the South African socioeconomic context. One participant gave a very succinct comment indicating the significance of access to services in the following quote:

"Cost, if I was not on such a good medical aid."

(Mother of Grade 5 learner)

The South African context to which we refer here is one characterised by a variety of difficult socioeconomic problems. Among these problems are the high

prevalence of HIV/ Aids, crime, unemployment, and poverty which are considered significant risk factors for mental health problems (Burns, 2011). The mental health problems associated with these societal concerns include depression and anxiety along with the more neuro-cognitive problems such as dementia (Burns, 2011). It can be argued therefore, that South Africa has a particularly high mental health burden. Despite this great burden, there are a variety of problems in South Africa which compromise its ability to meet these mental health needs. The problems include mental health institutions being outdated and unable to adequately meet the needs of those with psychiatric difficulties, a significant shortage of mental health practitioners who are qualified to support this population, an underdeveloped branch of tertiary health care and underdeveloped potential for community mental health care which would reduce the need for institutionalisation and allow for the individual suffering from poor health to be reintegrated into the community (Burns, 2011). An investigation into the provision of mental health services in rural areas in South Africa find that the services that are provided in these areas do not adequately serve the population of these communities. The services specifically fail to adequately treat those of the community suffering from bipolar disorder, schizophrenia, and depressive episodes (Petersen et al., 2009).

Elaborating on the issue of cost and availability, the suggestion was raised from the data whereby the costs of assessment services for the parents be reduced by having schools include a psychologist on their payroll thereby making them accessible to all learners regardless of their socioeconomic background. The insistence of participants that mental health services be made more financially accessible and available on school campuses reflects a nationwide need for greater accessibility. Burns (2011) conceptualises this need in an eight-point plan to improve mental health services. The points of this plan include a strong and united group advocating for mental health reform, legislative endeavours which abolish discrimination against those who suffer from poor mental health and eliminate barriers to the ability of those with mental health problems to participate in everyday life, the inclusion of mental health services in discourses around nationwide development strategies, an effort to establish mental health resources and services with adequate and equitable funding and the removal of barriers against mental health services for those with mental health difficulties along with social, recreational,

educational and occupational services. Indeed, the suggestion made by the participant follows the philosophy of Burns (2011) in his discourse around improving access to mental health services.

Mental Health services in South Africa have been scrutinised greatly due to problems which many South Africans experience in accessing these services. Lund, Petersen, Kleintjes, and Bhana (2012) determined that up to 75% of South Africans who suffer from mental health challenges do not receive adequate support in managing these challenges. This research suggested that decreasing cultural bias in mental health care in South Africa would be essential in reducing the gap in services (Lund et al., 2012).

Recently, the National Health Insurance Proposals have aimed to improve the access of many South Africans to health services, particularly as a means to address the gap in access to these services between rich and poor (Department of Health, 2019). That being said, the National Health Insurance (NHI) Proposals have been found wanting when it comes to prioritising mental health services (South African College of Applied Psychology, 2019). Despite a need for greater mental health care provision, little reference is made to this in the NHI bill and mental health professionals are as yet unaccounted for in terms of professionals to receive coverage from the bill (South African College of Applied Psychology, 2019).

Poor access to mental health services cannot be attributed entirely to a lack of basic infrastructure, although this is one of the biggest concerns with regards to the provision of mental health care access in South Africa today (Mkhize & Kometsi, 2008). There are also concerns around the accessibility or the appropriateness of the services which do exist. In countries such as South Africa, it is found that mental health care workers experience difficulty reaching people in need and struggle to create a clear line between clinics and hospitals and basic facilities such as telephones are unprepared to meet demand. Problems with professional ethics such as maintaining confidentiality further limit the accessibility of mental health services from the perspective of the client (Mkhize & Kometsi, 2008). Besides there being logistical problems associated with the provision of mental health services, there are also political barriers. The

Education White Paper 6 as promulgated in 2001 limited the work which can be done by educational psychologists when working with school children in posts which were removed from the school setting (Department of Education, 2001). This naturally limits the scope of educational psychologists in terms of the number of learners they are able to reach and the extent to which they are able to support them. For South Africans seeking psychological and mental health services in the private sector, there are also difficulties when it comes to receiving reimbursement from medical aid schemes. These private health insurance companies have been withdrawing financial reimbursement from South Africans treated for mental problems related to anxiety and depression while at the same time refusing to pay for non-clinical services entirely. Resultantly, services offered by educational psychologists, including those associated with assessments, are not within the scope of reimbursement offered by medical aid schemes (Fin24, 2017).

Looking back to the research conducted by Van Der Merwe (2008), one must also conclude that regardless of one's access to educational psychologists, the services provided by these practitioners do not necessarily meet the needs of most South Africans. This is due to the fact that cognitive assessment measures in particular originate from a different sociocultural background than most South Africans and are therefore based on different values. Black South Africans, in particular, struggle to engage with these assessments as a result, with their scores indicating lower degrees of competence than what would otherwise have been true (Van Der Merwe, 2008). Cocodia (2014) found that the philosophical and theoretical base of psychology in general is often incompatible with the culture of most South Africans. Again, the conclusion here is that while there is a need to improve access to psychological services (Bhana, 2012; Mkhize, & Kometsi, 2008), one must also address the gulf between practice and society (Cocodia, 2014; Van Der Merwe, 2008). For one participant, there is a need for greater investment in services related to assessments and support:

"If your child is struggling, the schools/teachers do not have enough time to properly focus on working out what the problem is and how to solve it. In private schools the teachers almost expect the parents to address the learning challenges themselves. In contrast, many of the better government schools invest more resources that the

parents aren't expected to pay for, and the school takes more ownership of solving learning challenges."

(Mother of two primary school learners and one preprimary learner)

The participant quoted above seems to speak to a need for public infrastructure which is able to support the provision of mental health services. Petersen, Lund, and Stein (2011) recommend a number of ways to improve mental health service provision in low- or middle- income countries, including South Africa. It is first recommended that the country establish adequate basic infrastructure to support mental health services. Central to this would be the passing of legislation prioritising mental health in the country. The second is the establishment of a culture of social inclusion where individuals with mental health difficulties can seek out mental health support services without experiencing stigma. The third recommendation for the improvement of mental health access would be collaboration between mental health practitioners and community organisations and Non-Governmental Organisations. The participation of community organisations can allow individuals to increase their social participation and advocate for social inclusion in the mental health system (Petersen et al., 2011).

The purpose of cognitive assessment can be defined as an exploration of intellectual achievement or an exploration of the potential for intellectual achievement in later life (Duckworth et al., 2011). With this potential being established, cognitive assessments allow for interventions to be developed which help mediate barriers to learning. According to Abraham Maslow, this process of mediation can be argued to be a means by which a child is assisted in their pursuit of self-actualisation (McLeod, 2007). We can therefore prioritise cognitive assessment according his hierarchy of needs (McLeod, 2007). Abraham Maslow's hierarchy of needs is a model by which one can understand the underlying motivation behind behaviour and decision-making. The original hierarchy prioritised the satisfaction of physiological needs for food and shelter as the primary need of all individuals. Physiological needs are followed by those of safety and security, community, self-esteem and finally, self- actualisation (McLeod, 2007).

For some years now, South Africa has been struggling with foundational level social problems involving poverty and unemployment. Statistics South Africa (StatsSA) has revealed that almost half the population of South Africa live below the poverty line with the number in Gauteng sitting at around a third of the adult population living below the upper bound poverty line (Stats SA, ND). It would be important, in terms of Maslow's hierarchy of needs, for social interventions in South Africa to focus first on alleviating the impact of poverty and unemployment on South African society before prioritising improving access to mental health services pertaining to cognitive assessment measures (McLeod, 2007).

A counter argument to this assertion would be to introduce the purpose of cognitive assessment. If the purpose of a cognitive assessment is the establishment of an individual's academic potential (Duckworth et al., 2011), then one can also argue that it is a means by which an individual's academic difficulties are established. Performance in school can be argued to correlate quite directly with a child's ability to achieve in employment and then provide for a family, thereby alleviating poverty. This assertion would be based largely on a medical model of disability, which would see cognitive assessment as being an instrument through which someone can be classified as either "functioning" or "disabled". These labels will allow for the individual to receive "treatment", which in the case of cognitive assessments would be academic or developmental support. Mental Health services, particularly those pertaining to cognitive assessment, could therefore be seen as fundamental to meeting needs at the physiological level of Maslow's Hierarchy (McLeod, 2007).

4.7.1.5. Outdated and Old-Fashioned Language

When discussing this theme, we are referring to the structural factors of the assessment, particularly language, in terms of the effect it has on the reliability of the measures. When discussing the issue of language, participants appeared to be particularly concerned with regards to the effect which inaccessible or outdated language can have on a child's interpretation of an assessment and ultimately its efficacy. This theme is one which speaks both to the cultural limitations of cognitive

assessments but is primarily a problem which affects all children who are assessed with these measures.

For most of the parents who spoke about language as being inaccessible; this inaccessibility was in relation to both the terminology of the tests as well as the language used by the practitioner when discussing the assessment with the child, explaining what it is that is required. The following quotation speaks directly to the need to bring assessment measures up to standard in terms of the present demographic situation:

"They are outdated, old fashioned, do not take into account current perceptions, and are therefore difficult for children to identify with. They need to be modernized, and standardized according to new demographics. In other words they are based on old no longer relevant data. Language is outdated too."

(Mother of two primary school learners)

This quote speaks to the need for language to be updated and made more accessible to all children who might find the language used by the assessment to be too anachronistic, too complicated or too vague, but it also introduces cultural differences into the discourse in terms of there being an identified need for more culturally inclusive language to be used in cognitive assessment with children as well as contextually appropriate language.

Foxcroft et al. (2004) discussed the logistical difficulties associated with conducting psychological tests. Among these logistical difficulties was the use of inaccessible language in assessment measures. It is argued that the use of vague or overly rich language compromises children for whom English is not a first language, making it more an assessment of language skills than one of cognitive ability (Foxcroft et al., 2004). One participant reflected her feelings around the language use in the following comment:

"Loaded with terminology - but attempts are made to explain it."

(Mother of primary school learner)

The impact of old fashioned and outdated language is doubly so for children who do not speak English as a home language. Lafon (2009) investigated the impact of English as a medium of instruction on learners who do not speak English as a home language. It was found that these learners tend to struggle in the classroom environment due to difficulties with understanding concepts; this naturally has a negative influence on their ability to grow and develop in an academic sense (Lafon, 2009). It has been found that the impact of English medium of instruction in classrooms has had a profound impact on South African society, with a significant discrepancy being found to develop between black and white South Africans in terms of academic development. Historically, with greater exposure to mother tongue learning, black learners were found to succeed significantly more in the classroom (Lafon, 2009).

One can look back to the research of Cummins (2008) here, who linked academic language proficiency to potential scores on cognitive assessments. If we look at language as a limiting factor in assessments according to parents even with children who are native English speakers, then we can expect a compounded impact on the children who do not speak English as a home language. Cummins (2008) made the link that learners who struggle with their development of academic English, judging by their scores on the language index of cognitive assessments will statistically score lower in terms of their FSIQ scores, even if their non- verbal index scores indicate appropriate development for their age.

Taylor and von Fintel (2016) found that there is a strong link between language of instruction and academic progress. Throughout Africa, it is found that English is the predominant language of instruction in schools. In South Africa, the Language in Education policy is one which attempts to promote all languages in a more equitable way while simultaneously improving the ability of all South Africans to collaborate and participate in the economy (Barnes, 2004). Longitudinal research reveals that African home language learners perform significantly worse than English language learners (Taylor & von Fintel, 2016). The research amplifies this discussion by determining that exposure to home language instruction in an educational context improves outcomes for learners in terms of academic development (Taylor & von Fintel, 2016). The idea behind this is that becoming

comfortable with their own language will allow learners to better develop other language skills. It can be concluded, therefore, that the system presently in place in South African schools is ideal and should be further nurtured in order to improve academic outcomes for learners and their grasp of English in later grades (Taylor & von Fintel, 2016).

It can therefore be argued that a degree of bilingualism will improve learners' academic development. It could be said, accordingly, that bilingualism in assessment would be an important step forward in terms of both school tests and, by extension, tests of intelligence (Clegg, 2007). It is argued that working in one's mother tongue will improve a learner's overall language ability along with their ability to understand concepts. These concepts will likely include those that feature in cognitive assessments. There are concerns about the viability of multilingualism, however. This includes concerns over the ability to crystallise academic concepts in African languages (Clegg, 2007). Barnes (2004) also found potential difficulties in integrating African languages into a mother tongue learning strategy including the ability of these languages to conceptualise academic concepts. For those ideas which can be linguistically conceptualised by African languages, it is found that there are inconsistencies in the conceptualisations even within the same language (Barnes, 2004).

4.7.1.6. Social Stigma Applied to Psychological Services

A concern which parents raised, which may well have had a significant influence on their perceptions around cognitive assessments, was the issue around stigma. There seemed to be an obvious concern among parents that their children, by being assessed will be judged or labelled and will suffer as a result of this judgment or labelling. One parent reflected that she was concerned that her child may experience the effects of stigma in the following comment:

"not too sure how - but maybe it shouldn't have a stigma attached to it that implies there are issues if your child is tested and then your child feels 'different'"
(Mother of primary school learner)

Stigmatisation around mental health and mental health interventions appears to be a social difficulty in South Africa. Kakuma et al. (2010) suggests that individuals with mental health difficulties suffer victimisation in South African society and often experience discrimination in terms of social services. Additionally, at a structural level, individuals who suffer with mental health difficulties are more vulnerable to engaging with criminal behaviour. Their mental health concerns are often ignored, and they are subsequently incarcerated as opposed to receiving mental health support. There also appear to be concerns around the treatment which such individuals experience at an interpersonal level with South Africans experiencing mental health difficulties being found to lose support from family and friends (Kakuma et al., 2010). A study which focussed specifically on rural areas in Australia determined that individuals who experienced mental health difficulties, regardless of the severity of these difficulties, were identified by their community as experiencing a psychiatric disorder. As a result, people in these communities will avoid exploring their own mental health and will not engage with necessary interventions (Wrigley, Jackson, Judd, & Komiti, 2005). It is this stigma which may be inspiring a degree of fear and confusion amongst the parents of this sample. One participant discussed her feelings around the assessment with reference to normalizing the experience in the following comment:

"Make it fun. Don't judge - kids can pick it up straight away."
(Mother of three primary school learners)

Parents seem to insist that the way forward from the stigma is to avoid judgment of children, which is to say that there is a broad attitude towards avoiding stigma altogether. Simply eliminating stigma by avoiding judgement altogether would seem overambitious and as such, it would be important to develop clearer, firmer, and ultimately more manageable goals. Corrigan (2004) describes three possible solutions to the issue of stigma around mental health. The first is protest, which involves publicly demonstration against structures and perceptions which are deemed to stigmatise mental health issues and people who struggle with mental health difficulties. The second is education, where advocates raise awareness about mental health and mental health interventions, including assessment, as a means to eliminate the various public misconceptions which surround mental health and the discrimination which results. The

third solution is contact, where members of the public experience exposure to the nature and reality of mental illness and contact is made with individuals who experience mental health difficulties (Corrigan, 2004). Despite crystallising the participant's philosophy of avoiding judgment, these solutions are still evidently lofty and might be difficult to implement. One participant registered her concern over the issue of medication and diagnosis in the following comment:

"don't over medicate, and ensure the correct diagnosis"

(Mother of primary school learner)

Another suggestion, past advocacy, is something of a renunciation of the medical model, and a laying of the blame for the stigma which their children might face on the process of diagnosis and medication which for some parents, seems to permeate mental health interventions in general and assessments in particular. The medical model is described as a model of understanding disability whereby individuals are applied with labels of either disabled or not disabled.

The medical model sees disability as being the result of inherent, personal, and individual problems which can only be managed with the use of personalised intervention (Areheart, 2008). Ultimately, disabled individuals are labelled as such without the benefit of social and contextual influences being taken into account (Areheart, 2008). Corrigan (2004) argues that, in spite of protests by participants, that the medical model is a practical means to support an individual struggling with mental health difficulties. The medical model, whereby the difficulty is specifically named, labelled, and treated in a very practical way, decreases the prevalence and the impact of these difficulties on general society. The process of labelling and diagnosis is, according to Banja (2015), focussed not on raising social consequences but improving the welfare of the individual struggling with the disability. Thereby, the argument against labelling as an aspect of social stigma would be said to interfere with what is an objective complication for an individual struggling with disability and the need of that individual to receive support in the form of treatment (Banja, 2015).

4.7.1.7. Summary

The most significant problem raised from these primary themes was the efficacy and reliability of the cognitive assessment measures, with particular concerns raised around the language used and the cultural applicability. Parents found that the cognitive assessments used featured activities more applicable to a Western populace and do not therefore reliably predict future academic achievement in children of non-Western origin. One might argue that assessments need to be adapted along with their administration so as to develop a more inclusive measure of intelligence, but this would not be without its challenges. It would be very challenging to norm samples on such a diverse global population, which might necessitate culturally homogenous assessments (Stichweh, 2007; Van de Vijver & Tanzer, 2004). Parents also made reference to concerns regarding the relationship between children and practitioner, believing that the overly clinical relationship makes the assessment overly professional and too rigid. It is argued that practitioners need to establish a more relaxed environment where time is taken to develop rapport and assuage the nervousness and fear of the children they work with. While the WISC-IV does provide for rapport building and addressing fears, there are very strict administration guidelines limiting the degree to which practitioners are able to engage in this (Wechsler, 2003). Linked to the issue of cultural validity in assessments is the issue of predictive validity. Parents register concerns that cognitive assessments fail to predict future academic achievement, although this is largely based on anecdotal evidence. While evidence does find that the WISC-IV is an accurate predictor of scholastic achievement, emotional intelligence is found to be an effective predictor in success after school (Canivez, Watkins, James, Good, & James, 2014; Parker et al., 2004).

Beyond concerns of validity, reliability, and administration, is the concern of the logistical access of cognitive assessment and psychological services. It is found that, indeed, many South Africans struggle to gain access to good quality psychological services (Burns, 2011). Although one could debate the degree of importance which can be placed on improving access to psychological services in the South African context, there are means by which this access and its quality can be improved. These means range from addressing poverty and unemployment to improving professional

cooperation between health care professionals (McLeod, 2007; Petersen et al., 2011). On the other hand, participants also reflected that they were concerned that cognitive assessments applied labels which caused the child to experience difficult societal stigma. While there is found to be a great deal of stigma experience by South Africans experiencing mental health difficulties and receiving mental health support along with people from other countries, it can also be said that the applied labels serve a utilitarian function (Banja, 2015; Kakuma et al., 2010). Labels applied by cognitive assessment can serve to guide practitioners working to support the child who might be experiencing manageable cognitive challenges (Banja, 2015).

Language use in assessments was a concern raised by participants which can be linked to the issue of cultural applicability in that it serves to marginalise children not of a Western background who do not speak English as a home language (Foxcroft et al., 2004). Additionally, assessments have been found to use language which is difficult to access even for children who do speak English as a home language (Foxcroft et al., 2004). While one can argue that multilingualism in cognitive assessment will rectify this difficulty, certain languages will be compromised by their difficulties with crystallising academic concepts (Clegg, 2007).

4.7.2. Secondary Themes

Primary themes are those that appear the most frequently in the data, but in the case of this research, were those themes which spoke more to the aims of the research. The secondary themes, on the other hand, allow for a deeper understanding of the topic under investigation. The secondary themes of this research are those that allow us to explore the relationship which participants have with their children, the schools, and the practitioners along with their own experiences with psychological services. These relationships and experiences can be investigated in terms of the influence which they had on the opinions of these parents towards assessments.

4.7.2.1. Secondary Themes and Theory

The secondary themes discussed below are important when linking back to both the General Model as espoused by Lerner, Li, Valdesolo, and Kassam (2015) and the Theory of Planned Behaviour as espoused by Ajzen (2005). The experiences which parents have had regarding cognitive assessment and psychological services in their own lives have had an evident impact on the way in which they feel about assessment. The emotions which come through as some parents reflect on their own experiences with psychological services resemble frustration and an awareness of their own anxiety. Lerner et al. (2015), in terms of their own theory, will see these feelings as having an impact on parents' decisions to expose their children to these services and assessments. Parents who were frustrated by their own experiences with assessment will anticipate further frustration if they were to reengage, even through their own children (Lerner et., 2015).

Ajzen (2005) will argue that parents will weigh their decision to have their children assessed against the degree to which they perceive themselves to have control over its resources. Participants in this study reflected that linguistic and cultural bias, in addition to a lack of material access to services, are barriers to their access to these services. Ajzen (2005) would likely conclude that parents will not feel that they have any control over the resource and will not experience themselves as being likely to gain any benefit from it and may well choose not to make use of it in support of their children.

4.7.2.2. Relationship between Parents, the School, and the practitioner

When referring to the relationship between the parents, school, and practitioner, this is related to the trust which parents have in their child's school and in their child's practitioner. In terms of the relationship between participants and educators, there was a lack of trust in the ability of the educators to manage their children in terms of cognitive areas in which they might be struggling. One respondent expressed concerns over the fact that schools do not take enough care to identify and support learners with special education needs in the following comment:

"My second son was struggling with reading yet his reports were not indicating a problem and the teacher continually told me not to worry and that guessing words is an acceptable reading strategy but I disagreed strongly with her. I also got very annoyed at the school's reluctance to share their annual cognitive assessments with me as a parent - they would only share the odd comment which did not help me get to the bottom of the problem."

(Mother of three primary school learners)

This quote gives an insight into why it is that parents might support the idea of cognitive assessment for their children. Parents who lack faith in the ability of their children's educators to establish cognitive strengths or weaknesses in their learners, will be encouraged to have their children assessed so that they can understand their children's difficulties better. While the relationship between parents and educators can encourage parents to have their children assessed, it can also prove to be a discouraging factor. Parents sometimes feel that cognitive assessments, along with referrals to services such as occupational therapy, are a way for educators to avoid managing learners in the classroom who experience difficulties or who struggle with academic demands. One respondent discussed their frustration with what they believed to be a lack of commitment by educators when it comes to supporting learners with special education needs in the following comment:

"I think it's a bit of a cop out. Teachers revert to that rather than giving them a chance to develop naturally. Really teachers should be open to teaching all sorts instead of jumping on the OT etc bandwagon when children aren't performing optimally"

(Mother of two preschool learners)

This comment is linked to one of a previous theme, where the educators are not as concerned with the development of their learners as they are with applying a label to them, which would follow them throughout their school career. The relationship between parents and practitioners also has an influence on the decision of parents to have their children assessed. The problems which parents had with practitioners or practitioners include is what they refer to as a lack of transparency in terms of the purpose of assessments and the meaning behind the outcomes.

Theoretically, what is being discussed here is a desire on the part of parents to be more involved in the education and development of their children. Kohl, Lengua, and McMahon (2000) defined parental involvement in a child's education as involving five dimensions. The first dimension is monitoring, which involves paying attention to the child's work and observing their engagement with it. The second dimension is volunteering, which is active engagement with school-based activities such as parents' organisations. The third dimension is involvement, where parents participate in their child's education by helping them study or completing homework with them. The fourth dimension is staying in touch with the school to ask after their child's progress. The fifth is working with educators to develop a plan by which they can support their child's development to a greater degree (Kohl et al., 2000). The concerns expressed by parents in this study appears to fall within the fourth and fifth dimensions. Two respondents expressed concern around a lack of support for parents who are ill informed as to the nature and purpose of assessments in the following two comments:

"Outcomes were vague, never really pin pointing the problem."
(Mother of primary school learner)

"if someone could explain the purpose of such a test then I would consider its appeal. you check someone's intelligence and then what???"
(Mother of primary school learners).

This theme, illustrated by these quotes, speaks to a need for stronger relationships between the parents, the practitioners responsible for administering, interpreting and reporting the results of the cognitive assessments and the educators, so that the parents can come to a greater understanding of why it is that their children need to be assessed and how it is that the assessments that are used will help the practitioners and educators develop a deeper understanding of the strengths and limitations of the child. With this understanding, the parents would be able to understand what it is about their children that the tests have discovered. This is central to allowing parents to take steps, in collaboration with their children's educators and practitioners, which will be effective in assisting their children moving forward.

Following these dimensions will, in practice, develop a relationship between parents and their children's educators. This collaborative relationship would likely be very important and effective when it comes to helping the child in their development and their academic competency. Research has found that the positive effects of parental involvement are most pronounced when it comes to primary school children, whose parents are the focus of the research (Hill & Taylor, 2004). As parents become more involved in the school's activities, they develop an awareness of the expectations from the perspective of the educators and therefore a greater awareness of the areas where their children need to develop. School involvement also allows for collaboration between parents as well as between parents and educators which allows for the sharing of problems, skills, and solutions, which further increases awareness and competency of parents when it comes to the development of their children (Hill & Taylor, 2004).

To conceptualise this relationship from a theoretical perspective we can turn to the Bio-ecological Model as espoused by Urie Bronfenbrenner which discussed the factors related to the individual and the various ways in which the environment acts upon this individual to encourage or discourage development (Krebs, 2009a). Bronfenbrenner discussed four components: those related to the characteristics of the person, those related to the environment, those related to the relationship between the individual and the forces of the immediate environment and those related to time. The components related to the environment of the child and the way in which they interact with this environment are those which relate most clearly to the idea of forming a collaborative relationship among parents, educators, and practitioners (Krebs, 2009a).

In terms of the environmental component, the collaborative relationship in question can be found in what is referred to as the mesosystem. The mesosystem is the conceptualisation of an interrelation between various systems with which the individual interacts directly (Krebs, 2009a). With regards to the collaboration to which the participants refer, this can be conceptualised as an interrelation of the parental system, who support the child in the home environment, the educator, who supports the child in the classroom and the practitioner who supports the child from the perspective of exploring their strengths and difficulties and developing an appropriate intervention which would advise the relationship the parent and educator can have with the child.

When thinking about the nature of parental influence on children within the mesosystem, we can return to the conception of decision making as espoused by Andrade and Ariely (2009). They discussed the significance of past emotional experiences on current decision making. It can be presupposed that a parent who had a negative experience of cognitive assessment measures of psychotherapy in the past might decide in the present to prevent their children from receiving the same services lest they suffer the same negative experiences (Andrade & Ariely, 2009).

Central to the effectiveness of this collaborative relationship is the component of proximal process, which is the conceptualisation of the interaction between the developing individual and significant figures in their environment with the relationship between the infant and the mother being arguably the first and most important such proximal process (Bronfenbrenner & Morris, 2007). The responsiveness of the figure, particularly the mother, to the needs of the child is central to the process but the relationship is also argued to be bidirectional. This suggests that the child needs to also be aware of how the forces impact upon them as a means to support their development and implies a collaboration between the developing child and the forces in their environment (Bronfenbrenner & Morris, 2007). It is very important for the relationship between the child, parent, the educator, and the practitioner to be conducive and positive in order for the interventions from these figures to benefit the development of the child. To this point, it would be important to refer back to the primary theme of the relationship between the practitioner and the child and the concerns which the participants had with the environment of the assessment space. Applying the component of proximal processes to that theme would allow for these concerns to be conceptualised as a need for a positive reciprocal relationship between the child and the practitioner. The parents elaborated on these concerns with suggestions of the practitioner working to create a relationship for a child which was positive, open, and fun (Bronfenbrenner & Morris, 2007; Krebs, 2009b).

While there is a need for closer collaboration between parents and school administration, there are barriers beyond the direct micro level interpersonal communication between parents and educators. These barriers are structural, beyond the realm of the direct contact between parents and educators (Donohue & Bornman, 2014).

South Africans, culturally speaking, often have disparaging views of learners with special needs and as such, decide against intervening on their behalf. These can include parents and those working within education, both roles devoted to supporting children. Beyond these cultural barriers are financial ones, there seems to also be a macro level concern around the possible financial burden of supporting learners with special education needs. In addition to social and cultural barriers to inclusive education are those at the government level. Government level interventions in this regard is arguably compromised by the vague nature of White Paper 6, which dictates the government's responsibility to learners with special education needs. In addition to this ambiguity, or perhaps as a result of it, there is a chronic lack of funding for schools in South Africa which can be used to promote inclusive education and a lack of staff who are qualified to understand and support learners with special education needs (Donohue & Bornman, 2014). It would therefore be a challenge to improve the collaborative relationship between parents and educators when there are structural societal barriers preventing these educators and schools from being able to support these parents, and their children, in a meaningful way.

4.7.2.3. The Influence of Parents' Experiences with Psychological Services

It is important to contextualise the perceptions of these participants when it comes to the cognitive assessment of their children. Among the ways of contextualising this perception is exploring the experiences which participants have had with psychological services in their own lives. These experiences are a theme brought about by the line of questioning of the questionnaire. When exploring the history which parents have had with assessment, it was discovered that a majority of parents had not been assessed themselves, with a little more than 30% of participants having been assessed. Of those who had been assessed, two of the participants had been assessed had received a career assessment, with only one indicating that she had completed a cognitive assessment. This participant indicated that this test had been ineffective as it was a mild multiple-choice test and she had not been feeling well on the day of the test. This participant discussed her experience in the following comment:

"It was inaccurate as I was sick on the day. It was unhelpful in terms of recommendations."

(Mother of two primary school learners)

Although this participant did not indicate what test it was that they had conducted specifically, there was an indication that the experience had been a negative one in largely the same way that the participant who had completed a multiple-choice cognitive assessment had experienced it. The concern which both of these participants had was that the test or assessment did not seem to be effective or reliable in exploring their respective strengths and weaknesses. These personal experiences can be linked quite closely to the concerns which these participants had in relation to the assessments of their children along with the reliability and efficacy of these assessments.

When discussing their experiences with psychological services in terms of therapeutic services, as opposed to assessment, a clear minority, n = 15, was again found when identifying the portion of the sample who had engaged with these services. Of those who had engaged with therapy, five of the participants reported having felt satisfied with their experiences to the degree that it was very beneficial to them. One such respondent shared her experience in the comment below:

"**I have consulted a psychologist during various testing times in my life such as losing a parent and having a child go to boarding school. Each time it has been especially beneficial."**

(Mother of two primary school learners)

The issue around parents' previous experiences with psychological services is significant beyond our exploration of parents' perceptions of cognitive assessment measures and allows us to understand how these perceptions influence their children's engagement with cognitive assessments. Research has indicated that the educational experiences of parents has an influence on the development of their children in that context (Eccles, 2005). Significantly, research has also indicated that the perceptions which parents have regarding the ability of their children to succeed in an academic setting will have an influence on their children's engagement in that setting and

ultimately their development (Eccles, 2005). The participants indicated that they felt that the IQ tests they completed were not an adequate indication of their true ability and might influence their child's level of self-confidence when they engage with the assessment themselves. The same would theoretically be true for those participants who had a positive experience with career assessments; they might help their children develop a positive attitude around these assessments and their subsequent engagement might be more productive (Eccles, 2005).

This aspect of the theme, illustrated by the preceding quote, speaks to the concern which participants have with the relationship they, and their children, have with practitioners. It is implied through the parents' responses to these questions that there is a need for a transparent practitioner who engages children in a testing context with the tone and atmosphere of a supportive and containing therapeutic space. This theme therefore allows us to contextualise the feelings which these participants have as conceptualised in the primary themes of efficacy and the relationship between the child and the practitioner. Degner and Dalege (2013) investigated the way in which parents' perceptions are adopted by their children although his research focussed on prejudice formation in children. It was found that children who identify closely with their parents and have a closer relationship with them, will have their socialisation significantly impacted by those of their parents. It can therefore be argued that parents who had a negative experience with assessments or psychological services may pass their attitudes towards psychotherapy and cognitive assessment on to their children (Degner & Dalege, 2013).

Elliot and Thrash (2004) also explored the philosophy of intergenerational transmission, although their research was centred around the transmission of a fear of failure. Fear of failure is defined, according to this study, as the active avoidance of situations or endeavours which bear the risk of failure. For one participant of this study, sickness lead her to perform at a level below her expectations on a cognitive assessment. Such experiences may result in parents rejecting the same testing for their children, perhaps fearing that their children might experience a similar degree of failure. In addition to this, Elliot and Thrash (2004) found that parents transmit their own fear of failure onto their children, who tend to alter their own educational and

career trajectory and miss a number of opportunities as a result. These are also found to lead to compromised psychological adjustment (Elliot & Thrash, 2004).

Gofen (2009) conducted research on the philosophy of children breaking the intergenerational cycle in terms of academic achievement. We can link the idea of parent's attitudes towards their own education to the idea of them developing attitudes towards their experiences. Parents who themselves struggled in school and did not achieve a particularly high level of education will not necessarily influence their children down the same path. It is possible that parents, in spite of their own experiences, will encourage their children to engage more with school and to achieve at a greater level (Gofen, 2009). While these parents do not necessarily serve as positive role models in terms of their own level of education, they may well serve as effective cautionary tales. By sharing their own experiences, these parents will assure their children of the importance of engaging in education and achieving at a higher level than they themselves did. Parents are also able to encourage their children's degree of engagement and success by assuring them of their own ability and their potential and by developing family values centred around success and achievement (Gofen, 2009).

It could be argued therefore, that parents who did not necessarily have positive experiences whilst being assessed might still be able to encourage their children to persist in their engagement with cognitive assessments, put their best foot forward and work towards a profile of themselves which matches their true potential (Gofen, 2009). Belsky, Conger, and Capaldi (2009) found that there were other moderating factors when it comes to breaking intergenerational cycles and identified extra-familial relations among them. It is argued that an individual could break familial cycles of perceptions, attitudes and behaviour with the intervention of close, supportive relationships, including those with a romantic partner or even a therapist. It can be further argued, therefore, that the intergenerational transmission of negative perceptions, particularly with regards to assessment, need not compromise an individual's engagement with assessments in perpetuity (Belsky et al., 2009).

4.7.2.4. Parent's Desire to Support their Children

Amidst the various concerns raised around the transparency of practitioners, the language used in the assessment and the implicit cultural bias of cognitive tests is an unwavering determination among parents to support their children in any way possible. This determination is exemplified in the following two comments:

"Yes. It breaks down in detail a child's strengths and weaknesses, thus enabling parents/educators to better understand and support the child."
(Mother of a primary school learner).

"There is nothing that would make us hesitate"
(Mother of primary school learner).

These two quotes illustrate a great desire among parents to support their children seemingly regardless of any concerns they might have regarding the reliability or efficacy of the assessment measures. While this has little impact on one's conceptualisation of an assessment or its efficacy, it contextualises the responses given in this research which do relate to these concerns. This theme also gives the practitioner a great deal of perspective when it comes to the perceptions which parents have of assessments. This theme also indicates a space for collaboration between parents, educators, and practitioners when it comes to assessing and supporting children as parents are so greatly invested in the process.

Parental support for children is found to have a very important role in development. Parental involvement is part of a supportive framework for children which also involves collaboration with the school. There are five activities through which parents involve themselves in the education and development of their children These activities include taking note of a child's work and progress, communication with the school, volunteering in school events, involvement in school activities, and collaboration with educators to support the child (Kohl, Lengua, & McMahon, 2000). Parents' perceptions of school and academics is also central to supporting children through

development. Taylor, Clayton, and Rowley (2004) found that parents were more involved in their children's education when they have a perception of their children's schooling that is positive. The active involvement of parents in their children's education and development has been found to be a predictor of success. Donkor (2010) found in a study on school learners in Ghana that children developed a positive attitude towards education when they were witness to the excitement of their parents. Ultimately, learners are motivated by the active interest and involvement of their parents in the education process (Donkor, 2010). Rogers, Theule, Ryan, Adams, and Keating (2009) also concluded that parental involvement is important, with active participation in the education of their children being essential to future academic success. Parents are found to therefore play a mediating role in their children's academic development (Rogers et al., 2009).

4.7.3. Summary

In terms of exploring parent's experiences with assessment services, we found that they struggled in terms of developing a supportive relationship with the school, their own past experiences with psychological services and their desire to support their children. Challenges are found in the relationship between parents and their school in terms of the school's ability to support children before and after assessment. It is found that this is a social endemic in South Africa as many educators and school systems are unable to support children with special education needs (Donohue & Bornman, 2014). It would be important for schools to improve their capacity to support learners with special education needs, but this would require for barriers at a societal, governmental and cultural level to be eliminated, including the vague language of government legislation, a lack of funding and poorly qualified staff (Donohue & Bornman, 2014**).** These barriers will need to be addressed before the education system can be adapted to accommodate learners in need of special consideration. A number of the participants made reference to their own past experience with assessments. It is found that parents do indeed transmit attitudes and perceptions onto their children which will influence their approach to assessments, but this is not necessarily impossible to overcome. With the appropriate support, children will be able to overcome the limits imposed on them by the adoption of their

parent's experiences and resulting perceptions (Belsky et al., 2009; Gofen, 2009. Regardless of their past experiences and their difficulties negotiating school systems, participants throughout the data insisted that they would support their children regardless of the challenges, even including taking them for a cognitive assessment. While children do indeed benefit from parental engagement, it does not necessarily condemn children who might have struggled with parental negligence, who might find success regardless (McGloin & Widom, 2001; Taylor, Clayton, & Rowley, 2004).

4.8. Summary of Results

This chapter was a summation of the nine themes which recurred most frequently throughout the data or which had the strongest relation to the aims and questions of the research. The primary themes give an indication as to the perceptions which parents have regarding the cognitive assessment of their children, while the secondary themes offer contextual factors which might have brought these perceptions about by giving greater insight into the factors which might have caused them to emerge.

CHAPTER FIVE: CONCLUSION

This final chapter is a summary of the overall findings of this research. This summary will include a discussion on the methods used in the research, a discussion of the overall findings of the research and how these relate to the theoretical background of the research. This chapter will include a discussion around the limitations of this study, along with some of its strengths and the resulting contributions which the research can make to the discourse around cognitive assessment measures.

5.1. Aims and Methods

The aims of this research were to investigate the perceptions which parents have of cognitive assessment measures, particularly with regards to their application to their children. By exploring theses perceptions, this research gives something of an indication as to how much value these assessments have in a South African context along with an indication as to the factors which might have brought these perceptions about. To this end, a survey was used which allowed participants to indicate their perceptions of psychological services along with any past experiences they have had with these services.

The instrument used in this research was a survey. The survey included 30 questions either closed-ended or open-ended. The sample used in this research included 40 parents of primary school children in the Johannesburg area. The survey was completely voluntary, and consent was attained from each of the participants. The collection of data maintained complete anonymity. The participants were not asked for their identifying details beyond those asked in the demographic portion of the questionnaire.

5.2. Overview of Findings

The data collected through the course of this research reaffirmed a number of concerns around cognitive assessment which was explored in the literature review and introduced a collection of themes not yet considered. Parents raised concerns around

the exclusionary nature of language in the assessment and cultural bias, problems with the reliability and the validity of assessments as accurate measures of intelligence and predictors of future success. These along with concerns with the therapeutic nature of the cognitive assessment environment and the logistical accessibility of assessments crystallised a number of challenges currently faced by practitioners when it comes to meeting the needs and the demands of the community in which they operate. Themes were also investigated pertaining to parent's own experiences with the assessment and psychotherapeutic experiences which provides context to the concerns which they raised. While it would be important to consider these concerns, especially around language and culture, one must also consider the significant barriers to making lasting changes to assessments especially in the South African context (Clegg, 2007; Stichweh, 2007).

The sample of this study consisted of parents of primary school children. The sample comprised parents of both independent and government schools in Gauteng but was compromised by problems with homogeneity. The sample was largely white and English speaking which ultimately fails to reflect the diversity of South African society. The same can be said of the educational and employment background of the sample which showed a group of parents educated at a tertiary level and formally employed in professions paying them salaries above R50 000 a year. This again, does not reflect South African society (Statistics South Africa, 2019). Regardless, the sample were able to offer significant insight into the nature of cognitive assessments from their perspective and the varying factors which contribute to the attitude which parents seem to have developed. The sample had had a diverse range of experiences with cognitive assessments. The children of the participants had completed assessments for school readiness, career aptitude and the identification of scholastic difficulties. In discussing these experiences, participants raised a number of themes which give us insight into the nature of assessments from the level of the parent who accesses these services on behalf of their children. These themes pertained to those directly related to the research questions, and to these not directly related to the questions but provide context for the perceptions which the parents raised.

The primary themes identified from the responses spoke to the concerns and issues discussed in the literature review around language, culture, the availability and accessibility of mental health services in South Africa and the ability of cognitive assessments to reliably predict future success both in the classroom and beyond. In terms of cultural concerns, a number of the participants felt that the measures were really only applicable to those of a western and urban background. This is said to be attributed to the nature of the subtests which include activities and so-called puzzles more in line with western culture. Linked to cultural applicability is the issue of language in assessment, which has also been found to exclude full and fair participation of children from non-western backgrounds (Foxcroft et al., 2004). One could argue therefore that there is a need for assessments which close the gap between the practical indicators of intelligence in non-western cultures and the measures of intelligence used. While this need is evident, it has been found that creating a culturally egalitarian measure of intelligence would be difficult to impossible in a context such as South Africa which is so diverse (Stichweh, 2007; Van de Vijver & Tanzer, 2004).

Continuing on the theme of diversity was the issue of language which the participants also raised. The parents sampled in the test notes that cognitive assessments, even in South Africa, largely employ English as a linguistic medium. This, once again, excludes learners not of a western background where English is the predominant medium (Foxcroft et al., 2004). In addition to concerns around the ability of cognitive assessments to meet the demands of a linguistically diverse society is the fact that cognitive assessments are reported to use language defined as “old fashioned” and “outdated”. This is found to have an impact on children even of an English-speaking background although literature focusses on its impact on those for whom English is not a first language (Foxcroft, 2004). While this does speak to a demand, once again, for a more culturally fair cognitive assessment, concerns around feasibility will need to be raised. While multilingualism both in the classroom and in assessment has been found to improve the development in children, there are concerns over the ability of all languages in South Africa to adequately convey the meanings and intricacies of the concepts used in assessment measures (Clegg, 2007).

Participants further raised concerns over the validity of cognitive assessments in terms of their ability to offer a full and accurate profile of a child and predict future achievement both in the classroom and later life. The sample introduced the idea of exploring children at a deeper level, including an investigation of their emotional intelligence as well as cognitive ability. It is argued that an exploration of emotional intelligence will offer invaluable insight into the ability of children to manage new challenges and respond to difficulties (Parker et al., 2004).

Participants registered their concern with the nature of cognitive assessments in terms of the relationship which the practitioner develops with the child before and during testing and the environment which the practitioner creates in which the assessments takes place. Parents in the sample seemed to feel that practitioners were too clinical in their approach to testing and too aloof to the point that children will struggle to engage with confidence. It is found that empathy from practitioners will help to alleviate anxiety with children who might be feeling intimidated (Mercer & Reynolds, 2002). The creation of an empathic space and the establishment of rapport between practitioner and child is compromised by the diversity of South Africa and what is reported as being a lack of social cohesion (Garden, 2009). Practitioners are also limited by the degree to which they are able to invest in rapport building when taking the strict guidelines of intelligence measures into consideration although some time is prescribed for this (Weschler, 2003). It can be said, therefore, that while there is space for psychotherapeutic rapport building in the assessment, this is somewhat limited at a micro level and when taking the macro context into consideration (Garden, 2009).

Participants also link the overly clinical nature of assessments to their outcomes and conclusions. Parents experience the conclusions of cognitive assessments as involving a significant amount of labelling, with their children being branded by the results which follow them throughout the remainder of their school career and even into their adult life. One can argue that cognitive assessments do employ a medical model of intervention which does provide labels of abled and disabled and one can indeed argue that there is a significant amount of stigma around mental health concerns in South Africa (Areheart, 2008; Kakuma et al., 2010). It does need to be argued, whoever, that the labelling of their children which parents experience is an essential part to

intervening in support of their children. The recommendations which conclude cognitive assessments reports are based on the conclusions which practitioners arrive at with regards to the children they assess (Banja, 2015). There is no doubt that much needs to be achieved in terms of alleviating the influence of social stigma around mental health in South Africa, but this need not necessarily include the elimination of the medical model as a model for assessment and the "labelling" which accompanies it (Banja, 2015; Kakuma et al., 2010).

Three secondary themes were identified in the data which allowed for a deeper exploration of participants' own experiences with cognitive assessments and psychological services. These themes included the participant's own history with Cognitive assessments, their experiences in working with schools to support their children and their own desire as parents to support their children regardless of the challenges involved.

With regards to the relationship which parents have with the school in terms of supporting their children who might be struggling in the classroom environment, participants were of the opinion that educators were largely unequipped to support children with special education needs (Donohue & Bornman, 2014). These participants also experienced schools as being largely unable to support them through the difficult process of assessment and remediation. Looking at this in the South African context we find that schools are largely unprepared to support learners with special education needs due to a variety of problems including cultural disputes with the idea of special education and inadequate interpretation of the White Paper 6 which results in the inadequate provision of resources towards the endeavour (Donohue & Bornman, 2014). These barriers make it difficult to overcome this issue although when taking Bronfenbrenner's theory into consideration, one will find that it would be important to integrate varying environmental stakeholders such as educators and schools in helping children to grow and develop in a healthy way, including their educational development (Donohue, 2014; Krebs, 2009a).

While their children might be experiencing challenges in their assessment, it is found that parents also raised their difficult assessment experiences. Regardless of the

nature of the assessment, some parents looked back to their own assessment experiences and found it to be either positive or negative. Some parents found that their assessment experiences failed to improve their circumstances by providing them with ineffective recommendations. Others considered their experiences with psychological services positive and found them to be helpful. One can find that parental perceptions and attitudes can be transferred to their children and can conclude therefore, that parents' perceptions of assessments will influence those of their children (Gofen, 2009). While it is possible that this can negatively influence their engagement with assessments if their parents are found to have negative attitudes towards psychological services one can find that children are able to break away from the attitudes of their parents and succeed in spite of them with interpersonal support (Belsky et al., 2009).

Regardless of their experiences with assessments and with the school system, the data indicated that parents are willing to take any course of action to support their children and their development. This speaks to the nature of parental engagement and its importance to the development of their children. It is found that parental engagement has a very positive impact on the development of their children.

This research has the potential to give the psychological practitioners a great deal to think about in terms of understanding the challenges to effective cognitive assessment from the perspective of the parents of children who are assessed. The participants of this research challenged practitioners to reconsider the nature of cognitive assessments in terms of its language and cultural bias, to improve on the clinical nature of the assessment environment, to improve accessibility of assessments and to reduce the level of stigma associated with mental health. While these themes do point psychotherapeutic practice towards very important introspection, one needs to consider greater societal and cultural barriers which would challenge the establishment of intelligence measures which are culturally fair, egalitarian, readily available and a psychological practice which is free of societal stigma (Clegg, 2007; Stichweh, 2007). One must also consider the nature of the participants' own experiences with assessment and psychotherapeutic services and not only how these might impact on their own perceptions of testing but how it might impact on their children's perceptions of testing and their engagement with the process (Gofen, 2009).

5.2.1. Findings in Relation to Theories

The findings of this research, once divided into primary and secondary themes, can be linked to the aforementioned General Model of Decision-making as discussed by Lerner et al. (2015) as well as the Theory of Planned Behaviour as espoused by Ajzen (1985). The secondary themes speak to parents' past experiences with psychological services in general and cognitive assessments in particular. These experiences range from positive to negative with some participants having found therapy useful with cognitive assessments having been of little use to them. These experiences, as Barclay et al. (2005) discuss, result in emotional responses based on the nature of the experiences which these parents had. Tappolet (2012) found that emotions, the primal, affective response which individuals experience as a result of an experience, will be inherently linked to their perceptions of these experiences. When taking the research of Li, Ashkanasky, and Ahlstrom (2014) into consideration, we can come to the conclusion that parents who found their own experience with psychotherapy or cognitive assessments to have been negative may decide against making use of these services in future, even when it comes to the assessment of their children.

Lerner et al. (2015) established a model which further conceptualised the philosophy espoused by Li et al. (2014) in the form of the Emotion-Imbued Choice (EIC) model. This model will argue that the participants who found their own experiences with psychological services to be negative along with those who felt that assessments were invalid, biased or in anyway not beneficial, will decide against having their children assessed. This will be due to the emotions they experience at the time of the decision along with those emotions they experience themselves and their children to feel as a result of the assessment (Lerner et al., 2015). Based on some of their responses, parents can be expected to experience feelings of fear and anxiety at the time of the decision, based on their past experiences as well as expect that by engaging with the assessment, they and their children will experience disappointment as a result of the failure of the assessment to establish an accurate and beneficial profile of them (Lerner et al., 2015).

Ajzen (1985) introduced a Theory of Planned behaviour, which offers a conceptual basis by which we can understand the perceptions which the participants have presented in this research. The theory of planned behaviour posits that the decision to engage with a particular behaviour is influenced by three factors. These factors are beliefs about the potential outcomes of the behaviour with which the individual considers engaging, the second factor is beliefs about the cultural or societal expectations associated with the behaviour and the third factor is the individual's understanding of those factors which might inhibit the ability of the individual to successfully engage with the behaviour, or support it (Ajzen, 1985).

The findings of the research can be linked to two of these factors, namely those related to potential outcomes of a behaviour and those related to the varying factors which might hinder or support an individual's ability to engage successfully with this behaviour. These two factors need to be seen, in terms of the findings of this research, in relation to one another. The parents express a significant concern around the reliability and the efficacy of these cognitive assessment measures, which is to say the ability of the assessment tests to accurately determine the cognitive ability of a child and predict how that child will perform in an academic setting. These negative expectations around the prospective outcomes of the assessments will likely have an influence on their faith in these measures and, ultimately, their decision to have their children assessed. This factor needs to be seen in conjunction with the third, which involves a parent's perceptions of the factors which might influence the ability of their children to engage with the assessments in an effective and accurate way. The participants have identified factors such as outdated language, cultural bias and overly sterile assessment spaces as being factors which might compromise their children and have an unwanted impact on the outcome of their assessment which might translate to the application of an unfair label in future (Ajzen, 1985).

These models provide a link between the primary and the secondary themes in that they offer a theoretical base by which we can understand how parents' experiences with psychological services can influence their perceptions of these services (Ajzen, 1985; Lerner et al., 2015). One would expect, based on these two models and on the responses, that the negative experiences which a number of the

participants reported having with psychological services would result in their reluctance to have their own children assessed (Ajzen, 1985; Lerner et al., 2015). The final theme indicated, however, that in spite of their own misgivings, parents were largely prepared to take any course of action if they felt that it was in the best interest of their children.

5.3. Limitations and Recommendations

Limitations associated with research are problems with the foundations of the research which are typically beyond the control of the researcher. Limitations of research typically emerge from the methods of the research in terms of the way in which the data is collected (Simon & Goes, 2013). Limitations in research have the potential to limit the depth of the results in terms of the themes you are able to identify and might influence the results completely, developing a view of the topic under discussion which is inaccurate or inadequately developed. Qualitative research, such as that which characterises this research, is often influenced by limitations associated with authenticity and trustworthiness, as the research is conducted in a natural setting, making it difficult to replicate the study in future (Simon & Goes, 2013).

5.3.1. The Survey Instrument

The survey instrument, such as the one employed in this study, is an aspect of the method which has been found to be a limiting factor in the efficacy of the research study. The first problem associated with surveys is the factor of time constraints which are typically a factor in this instrument. Time constraints attached to surveys can compromise the involvement of prospective participants who are unable, due to a variety of reasons, to complete the survey on time (Simon & Goes, 2013). This would naturally limit the number of participants and compromise the depth of the data that is collected. Surveys also limit the research by confining participants to a specific response, regardless of whether the question is open-ended or closed-ended (Simon & Goes, 2013). Participation in the study was also limited to those with internet access as both participating schools chose to focus on email as a means to send the survey out to parents.

5.3.2. Sample Size

The most significant limitation of this study was its sample size. The sample, due to practical problems associated with conducting research with a variety of schools, was limited to only 40 participants. It was initially the hope of the researcher that there would be closer to 80-100 participants from a variety of schools, both government and private. A seeming lack of interest from almost all schools contacted, however, severely limited the portion of the population to which I was granted access. The data which was gained from this limited sample was enough to establish persistent themes in terms which both confirm the problems associated with assessment measures as identified in the literature research as well as introduce new themes in terms of concerns which had not previously been considered. The limited sample size, however, disallowed the inclusion of participants who might have confirmed or refuted the themes which were introduced and compromised the ability of the researcher to explore the themes which did emerge with a greater degree of depth.

5.3.3. Diversity in the Sample

In addition to the problems associated with the size of the sample, there were also problems associated with sample diversity. The sample did feature a degree of ethnic diversity along with diversity in terms of income, but with the sample being as limited as it was, this degree of diversity failed to conform to those of which the country is characteristic (Nkosi & Daniels, 2007; Statistics South Africa, 2019).

5.3.4. Recommendations

With reference to these last two limitations, it is strongly recommended that future researchers widen the net of focus beyond Johannesburg and attempt to represent the entire country. Making use of an online survey that can be send around the country, will allow for researchers to reach a wider portion of the population than that which was obtained in this study. This recommendation will allow the researcher to widen their net and obtain a sample which is far more diverse and far more representative of the population under investigation, it will, however, limit the participation of schools who

are unable to make use of online resources to access a potential survey. It is further recommended that great effort be taken to ensure wide participation of special needs schools. This may aid in establishing a sample with greater and broader experience with cognitive assessment measures in particular and psychological services in general.

5.4. Strengths and Contributions of the Research

It is found, in spite of the limitations of this research, that there are a number of recommendations which educational psychologists might be able to incorporate into their practice. The first of these is greater cultural competence. While it would be very difficult for assessments to be modified to accommodate the diverse linguistic and cultural profile of South Africa, there is still a great need for practitioners to be able to work more effectively with clients of a non-western background as well as clients who might be struggling with the language of the assessment. Another recommendation would be for practitioners to be better prepared to engage children in managing their fears and building rapport in the room.

Even with a sample limited to largely white parents, the problems associated with cultural applicability and financially accessibility were still voiced. These problems being those which one would have expected to only come through with a sample featuring parents without the same financial means of a cultural group not reflected in the underlying philosophy of cognitive assessment measures.

In addition to meeting the expectations for the findings as outlined in the literature review, the research allowed for the emergence of themes not inherently related to sociocultural or socioeconomic problems. These problems include the use of outdated language, the relationship between the child and the practitioner along with the therapeutic nature of the assessment space, and the need for greater collaboration between parents, educators, and practitioners. These problems are applicable to all families regardless of sociocultural or linguistic background and can form the basis of a new conceptualisation of assessment methods. In moving forward the philosophy of the expert practitioner can be replaced with one which sees the family take greater control over their own assessments and over their own psychotherapy. This effectively

reconceptualizes assessments in particular as being a process of problem solving, with the practitioner and the client playing equal parts in developing a way forward (Amod, 2013a). Significantly, in terms of future research in this area, these unexpected themes allow for a more holistic literature review along with the development of an instrument that allows greater space for participants to explore these experiences or concerns.

5.5. Conclusion

This study focussed on the perceptions of parents towards the cognitive assessment of their children. The research may well have been limited by the instrument used, confining participants to specific answers and was also likely compromised by a sample not as large or as diverse as previously hoped. The research was, however, able to identify a number of themes around the issue of cognitive assessment of children. These issues centred around factors compromising the validity of assessments when it comes to the ability of measures to determine a child's cognitive ability and reliability as it relates to the ability of assessments to predict future academic success. The themes related to efficacy involve problems associated with sociocultural diversity such as linguistic and cultural bias in the tests, along with more neutral problems such as outdated or overly vague language and an assessment space which is overly clinical and not containing enough to put the child at ease. The problems raised by participants around cultural bias was also discussed in relation to the reliability of the assessment, or its ability to predict the future academic development or success of children, particularly those of a rural, non-Western background.

The research also reflected an identified need for greater collaboration between parents, educators and practitioners, so as to ensure that there is more transparency around the nature of the assessments, their purpose and the meaning behind their outcomes so as to allow this collaboration to work to develop a holistic and relevant post assessment intervention. Many of the participants had experiences with psychological services and, with the exception of cognitive assessments, found these to be beneficial. This might offer an explanation for the perception which parents have towards these assessments and their concern with the therapeutic nature of assessment services. Despite the limitations of this research, it introduced a variety of unexpected themes

which might form the basis of a more holistic instrument in future research, with a larger and more diverse sample.

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PARTICIPANT QUESTIONNAIRE

CONSENT

I_____, consent to participation in this study. I understand that the data collected will be stored indefinitely and used for research purposes only. In this regard, it will be published in the form of a research report. It may also be presented at a conference and/or published as a journal article. Confidentiality and the anonymity of all participants will however be maintained at all times.

_____ _____

Signature Date

Thank you very much for participating in this study. Please complete all of the sections below as comprehensively as possible.

Please note that when referring to cognitive assessment measures during the course of this study, we are referring to tests which measure an individual's cognitive functioning in terms of attention, memory and intelligence. Examples of cognitive assessment measures include the Attentional Capacity test, the Camden memory test and Intelligence quotient measure.

SECTION 1: BIOGRAPHICAL INFORMATION

Please answer questions below with a tick (ü) or a cross (x) as applicable to you

1. Gender*:

Female	
Male	

2. Age Range:

20 to 25	
26 to 30	
31 to 35	
36 to 40	
41 to 45	
46 to 50	
Over 50	

3. Ethnic Group*:

Asian	
Black	
Coloured	
Mixed-Race	
White	
Other (Please Specify)	

*Included for statistical and analytic purposes only

5. Home Language:

Afrikaans	
English	
IsiNdebele	
IsiSwati	
IsiXhosa	
IsiZulu	
Sepedi	
Sesotho	
Setswana	
Sign language	
Tshivenda	
Xitsonga	
Other (Please Specify)	

4. Which grade is your child in?

000	
00	
0/ R	
1	
2	
3	
4	
5	
6	

7	

5. Does your Child attend a Government or an Independent/Private School?

Government	
Independent	
Other (Please specify)	

6. Mother's Highest Level of Education:

Primary School (Grade 7)	
Grade 8 or 9	
Grade 10 or 11	
Grade 12 or the Equivalent	
Certificate	
Higher Certificate	
Diploma	
Postgraduate Diploma	
Bachelor's Degree	
Professional First Degree Postgraduate	
Honour's Degree	
Master's Degree	
Doctorate Degree	

7. Father's Highest Level of Education:

Primary School (Grade 7)	
Grade 8 or 9	
Grade 10 or 11	

Grade 12 or the Equivalent	
Certificate	
Higher Certificate	
Diploma	
Postgraduate Diploma	
Bachelor's Degree	
Professional First Degree Postgraduate	
Honour's Degree	
Master's Degree	
Doctorate Degree	

8. Please select which salary category (per month) your household falls into:

R 0 – R 5000	
R 5 001- R 10 000	
R 10 001 - R 15 000	
R 15 001 – R 20 000	
R 20 001- R 25 000	
R 25 001- R 30 000	
R 30 001- R 40 000	
R 40 001- R 50 000	
R 50 001 +	

9. Mother's Career Field?

Accounting Sciences	
Economic & Management Sciences	
Human Sciences	
Science, Engineering & Technology	
Agriculture & Environmental Sciences	

Education	
Law	
Other (Please Specify)	

10. Father's Career Field?

Accounting Sciences	
Economic & Management Sciences	
Human Sciences	
Science, Engineering & Technology	
Agriculture & Environmental Sciences	
Education	
Law	
Other (Please Specify)	

SECTION 2: COGNITIVE ASSESSMENT MEASURES / INTELLIGENCE TESTS

11. My child (includes all children in family) has undergone a cognitive assessment / intelligence testing

Yes	
No	
If yes and more than one child, how many?	

12. If you indicated in question 10 above that your child/children has/have been referred for a cognitive assessment/intelligence testing, who made the referral?

I did	
The school did	
Someone else (please specify)	

13. If you indicated in question 11 above that your child/children has/have been referred for a cognitive assessment/intelligence testing and you did take him/her/them, what motivated your decision (please elaborate and provide as much information as possible)?

14. If your answer to Question 11 was yes, what was the nature of the assessment (more than one option can be chosen depending on number of children and/or number of referrals)?

School Readiness Assessment	
Career Assessment	
Exploration of Difficulties Experienced	
Other (please specify)	

15. If your answer to Question 11 was yes, what was the outcome of the assessment and were the outcomes helpful to you as a parent?

16. My child (includes all children in family) has been referred for a cognitive assessment / intelligence testing?

Yes (and I have taken her/him)	
Yes (but I have not taken him/her)	
No	

17. If you indicated in question 12 above that your child/children has/have been referred for a cognitive assessment/ intelligence testing and you did not take him/her/them, what motivated your decision (please elaborate and provide as much information as possible)?

18. **If your child/children has/have never been referred for a cognitive assessment/intelligence testing, is there anything that would motivate you to take him/her/them (please elaborate and provide as much information as possible)?**

19. **If your child/children has/have never been referred for a cognitive assessment/intelligence testing, is there anything that would make you hesitant to take him/her/them (please elaborate and provide as much information as possible)?**

20. **I believe that it is a good idea for children to undergo cognitive assessments/intelligence testing?**

Yes		No	
Please elaborate on your answer			

21. **Rank the following factors by importance in terms of what you would consider before taking your child to a specific person for a cognitive assessment/intelligence test**

The person's first language	
The person's qualifications	
The person's fees (cost of the assessment/test)	
The person's experience	
The person's ethnicity	
Other (please specify)	

22. **As a child/young adult, I underwent a cognitive assessment/intelligence testing?**

Yes		No	

Please elaborate on your experience of this:

23. As a child/young adult, I never went for a cognitive assessment/intelligence testing, but I believe that it would have benefitted me?

Yes		No	
Please elaborate on your answer:			

24. I have consulted with a psychologist in the past (aside from undergoing a cognitive assessment/ intelligence test as noted above)

Yes		No	
Please elaborate on your answer:			

25. If your answer in question 23 was yes, please elaborate here on your experience and what you found helpful/unhelpful?

Please elaborate on your answer:

26. I believe that cognitive assessments/intelligence tests employ accessible language?

Yes		No	
Please elaborate on your answer			

27. I believe that cognitive assessment measures are appropriate to my culture?

Yes		No	
Please elaborate on your answer:			

28. Do you feel cognitive assessments/intelligence testing can be made more inclusive? How so?

29. If you can make any recommendations to a practitioner on ways in which cognitive assessments/ intelligence testing can be made more appealing, what would you say?

Thank you very much for partaking in this study. Your assistance and input is greatly appreciated. Please note that by submitting this questionnaire, you consent for the information given to be used for research purposes. Anonymity and confidentiality will be maintained at all times.

For assessment and counselling services:

Emthonjeni Centre – University of the Witwatersrand (East Campus)

011 717 4513

(FAMSA) Families South Africa

011 975 7106

(PsyCaD) Centre for Psychological Services and Career development

011 559 1318 (Auckland Park Bunting Road)

011 559 3324 (Auckland Park Kingsway)

011 559 6042 (Doornfontein)

011 559 5752 (Soweto)

PRINCIPAL INFORMATION LETTER

Dear Sir/ Madam

Good day. My name is Sean Neveling and I am currently conducting research for the purpose of completing my Masters Degree in Educational Psychology at the University of the Witwatersrand. The topic of my research will be cognitive assessment measures; more specifically the perceptions which parents hold regarding the benefits and applicability of these measures. For the purpose of this study I will require participants and would therefore like to request your permission to invite the parents of your learners to participate in the study.

Purpose of this Research

This study aims to investigate the perceptions of parents with regards to cognitive assessment measures, particularly as they are applied to pre-primary and primary school age children; specifically the applicability and value of these measures in a South African context. During the course of the study, specific attention will be given to the factors which shaped parents' perceptions of cognitive assessment measures and thus the origins of their perceptions. It aims to do so by not only exploring parents' broad perceptions towards cognitive assessment measures in particular and psychological interventions in general, but also by focusing on any past experiences they may have had with cognitive and psychological assessments which may have influenced these perceptions.

The Researcher's Expectations

With your permission and written consent, an email will be sent to all the parents in the school inviting them to complete a questionnaire which will be made available online on SurveyMonkey. Should parents wish to complete questionnaires in writing; these can be made available via email. Parents can return these questionnaires to a sealed box which will be made available in your reception area. I will however consult with you as to the best ways in which parents can access and submit questionnaires as I would value your input in this regard. It should take parents approximately 15 minutes to complete a questionnaire. Once completed parents will submit the questionnaires online or as noted, in a sealed box in your reception area. Once again, with your permission reminders can be sent to parents to complete these questionnaires.

Anonymity, Confidentiality and Voluntary Participation

Participation in this study will be completely voluntary and no parents will be coerced or forced to partake in the study. There are no benefits for taking part in the study; nor do I foresee any risks to the participants. Participants have the right to withdraw from the study at any point whilst completing the questionnaires and they also have the right not to answer any questions which they do not feel comfortable with. Once the questionnaires have been completed however, participants will no longer be able to withdraw as there will be no information on the questionnaires which can link it to particular participants. Participants will be informed of this, as well as the fact that by submitting a particular questionnaire, a participant gives me consent to use the information for the purpose of this study. As noted, participants will not be required to provide any information which might link a particular questionnaire to a particular person, thus ensuring confidentiality and anonymity

in the publication of the research report and any other publications which might arise from this. Should any direct quotes be used, these will be reported in a completed anonymous matter. Likewise, the identities of the schools who agree to partake in the study will also be kept confidential and no school will be mentioned in the final research report or any publications that might arise from it. At no point will participants be linked to specific schools. The questionnaires will also include referrals to assessment organizations should they want more information.

Data Handling and Reporting of Findings

The questionnaires collected from the study, as well as the names of the schools who agree to partake, will be available only to myself and my supervisor and will not be made accessible to any other party. Completed questionnaires will be kept in a locked cupboard at the University of the Witwatersrand. Online questionnaires will be kept on a password protected computer. The data collected from the questionnaire will also be kept on a password secured computer. The data collected will be analysed and then used to create a research report which will be submitted to the University of the Witwatersrand for degree purposes after which it will be made available online on the Wits Institutional Repository Environment on WIReDSpace. In addition, the research may also be presented a conference or published in the form of a peer-reviewed journal article.

A summary of the findings will be made available to the schools involved as well as to parents upon request.

If you have any follow up questions, please feel free to contact me.

Student Educational Psychologist

Sean Neveling

148325@students.wits.ac.za

Research Supervisor/ Educational Psychologist

Adri Vorster

adri.vorster@wits.ac.za

PARTICIPANT INFORMATION LETTER

Dear Sir/ Madam

Good day. My name is Sean Neveling and I am currently conducting research for the purpose of completing my Masters Degree in Educational Psychology at the University of the Witwatersrand. The topic of my research will be cognitive assessment measures; more specifically the perceptions which parents hold regarding the benefits and applicability of these measures. For the purpose of this study I will require participants and would therefore like to invite you to participate in the study.

Purpose of this Research

This study aims to investigate the perceptions of parents with regards to cognitive assessment measures, particularly as they pertain to pre-primary and primary school age children; specifically the applicability and value of these measures in a South African context. During the course of the study, specific attention will be given to factors which shaped parents' perceptions of cognitive assessment measures and thus the origins of their perceptions.

The Researcher's Expectations

Participation in this study will involve the completion of the attached biographical and perceptions' questionnaire, which should take approximately 15 minutes. These questionnaires can be completed in writing and then submitted to a sealed box placed in your reception area. Alternatively, you can complete it online on SurveyMonkey by using the link forwarded in this email.

Anonymity, Confidentiality and Voluntary Participation

Your participation in this study will be completely voluntary and you will not be coerced or forced to partake in the study. There are no benefits for taking part in the study; nor do I foresee any risks to the participants. You have the right to withdraw from the study at any point whilst completing the questionnaires and you also have the right not to answer any questions which you do not feel comfortable with. Once the questionnaires have been submitted, however, you will no longer be able to withdraw as there will be no information on the questionnaires which can link it to you. By submitting a completed questionnaire, you consent to the use of the information for the purpose of this study. As noted, you will not be required to provide any information which might link a particular questionnaire to you as an individual, thus ensuring confidentiality and anonymity in the publication of the research report and any other publications which might arise from this. Should any direct quotes be used, these will be reported in a completed anonymous matter. Likewise, the identities of the schools who agree to partake in the study will also be kept confidential and no school will be mentioned in the final research report or any publications that might arise from it. At no point will participants be linked to specific schools. Referral information to assessment and psychotherapeutic organizations are included below if you would like more information on the topic of assessment/or consult with a psychotherapist.

Data Handling and Reporting of Findings

The questionnaires collected from the study, as well as the names of the schools who agree to partake, will be available only to myself and my supervisor and will not be made accessible to any other party. Online completed questionnaires will be stored on a password locked computer. Written questionnaires will be kept in a locked cupboard and the University of the Witwatersrand. The data collected will be analysed and then used to create a research report which will be submitted to the University of the Witwatersrand for degree purposes after which it will be made available online on the Wits Institutional Repository Environment on WIReDSpace. In addition, the research may also be presented a conference or published in the form of a peer- reviewed journal article. The data will be archived long term for possible use in future research on the topic of cognitive assessment.

A summary of the findings will be made available to the schools involved as well as to you upon request. If you have any follow up questions, please feel free to contact me.

Student Educational Psychologist
Psychologist

Sean Neveling

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Research Supervisor/ Educational

Adri Vorster

adri.vorster@wits.ac.za

FOR ASSESSMENT AND COUNSELLING SERVICES:

- Emthonjeni Centre – University of the Witwatersrand (East Campus): 011 717 4513
- (FAMSA) Family Life South Africa: 011 975 7106
- (PsyCaD) Centre for Psychological Services and Career Development:
  - 011 559 1318 (Auckland Park Bunting Road)
  - 011 559 3324 (Auckland Park Kingsway)
  - 011 559 6042 (Doornfontein)
  - 011 559 5752 (Soweto)

PROTOCOL NUMBER (for office use only): _____

University of the Witwatersrand, Johannesburg

Ethics Application Form* for *Human Research Ethics Committee (HREC Non-Medical)

(Revised December 2012)

Use this form in applying for clearance of research involving human participants

Instructions

1. Completed applications must be submitted to the Research Office approximately three weeks before each of the monthly meetings. The deadlines are available on the Wits Research website http://www.wits.ac.za/academic/research/ethics.htm/7075/ethics.html
2. Applications must be submitted as hard copies, one of which must be an original (see checklist below for numbers of copies required). Electronic submissions will not be accepted.
3. All submissions and materials must be typed. Handwritten submissions are **NOT** acceptable.
4. Incomplete applications will **NOT** be considered.
5. Applications will **NOT** be processed if signatures from applicant or supervisor are missing.
6. Photocopying should be done 'back-to-back' to save paper.
7. Glossy and fancy binding is **NOT** necessary.
8. Necessary supporting documents (e.g. *Participant Information Sheet, Consent Form*, copies of instruments), must be stapled to the *Ethics Application Form*.

Complete this checklist to show what documents you have submitted.

☑	**Check list**	**No. of copies required**
For all research:		
	Completed *Ethics Application Form*	15
	Copies of the research proposal	4
	Copies of proposed research instruments (e.g. questionnaires/interview schedules)	4
	Participant Information Sheet (for each different sample group)	4
	Consent Form [*Assent Form* for under 18s] (for participant's signature) (for each different sample group)	4
Where applicable (Attach to this form):		
	Relevant permissions (from, e.g. company's HR department, National authorities such as Education, Correctional Services, etc.) or other legally required consent	4
	Any other appropriate consent forms (e.g. consent forms for members of focus groups, consent forms (for video or photography), etc.	4
	Guardian *Consent Form* (for participants under the age of 18)	4
	Other (please specify)	4

Declaration

I recognise that it is my responsibility to conduct my research in an ethical manner according to Guidelines of the University of the Witwatersrand, according to any laws and/or legal frameworks that may apply, and according to the norms and expectations of my discipline.

In preparing this Application for Ethics Clearance form, I have consulted the ***Guidelines for Human Research Ethics Clearance Application /non-medical*** (available on this web site http://web.wits.ac.za/Academic/Research/Applications.htm) and have familiarised myself with the ethical guidelines specific to my discipline.

Signature _____

Name of researcher/applicant Sean Neveling

1. Researcher's personal data

Surname: Neveling				Name: Sean				
Title:	[ ] Prof	[ ] Dr	[X] Mr	[ ] Ms	[ ] Mrs	[ ] Other:		
School: School of Human and Community Development								
Staff / Student number: 1478325				[x] Full time	[ ] Part time	[ ] Staff		
Your telephone(s): 079 513 6698								
Your Email: 1378325@students.wits.ac.za								
Name of Supervisor (if applicable): Adri Vorster								
Supervisor's email address: adri.vorster@wits.ac.za								
Supervisor's tel. number(s): 011 717-4554								

2. Specifics about the research project

Title of research project

The Perceptions of Parents Towards Cognitive Assessment Measures

Is this research for degree purposes?	[x] **Yes**	[ ] **No**		
If so, for what degree?	[ ] **Honours**	[ ] **Masters (dissertation)**	[X] **Masters (research report)**	
	[ ] **PhD**	[ ] **Other (specify):**		
Has it been approved by the relevant higher degrees committee or other relevant unit?	[ ] **Yes**	[ ] **No**	[x] **Submitted & pending**	

List the names and affiliations of any *additional* researchers who will be covered by this ethics protocol

N/A

Where will the research be carried out?

The study will be conducted online, with parents of school age children from schools in the Johannesburg area.

What are the aims and objectives of the research? (Please list; be brief)

The study, primarily, aims to establish a generalisable perception which parents hold regarding cognitive assessment measures and their value within the South African context, particularly as it pertains to their children. In addition it also aims to explore the factors which shaped parents' perceptions of cognitive assessment measures and thus the origins of their perceptions. It aims to do so by not only exploring parents' broad perceptions towards cognitive assessment measures in particular and psychological interventions in general, but also by focussing on any past experiences they may have had with cognitive and psychological assessment which may have influenced these perceptions.

Do you have any financial or material interest associated with your research participants or with the organisations that you will work with during your research?

[ ] Yes	[x] No	[ ] Potential conflicts of interest may exist

Please explain how you will manage any existing or potential conflicts of interest, if applicable.

INFORMATION RELATING TO ETHICAL MATTERS

Protocols submitted to the Committee must have sufficient information to enable the committee to judge the ethical implications of the proposed research. Please be brief and concise but also as specific and informative as possible

3. Formal permission

Has appropriate formal permission been obtained, if required (e.g. employer, government department, land owner, etc.)?

[ ]	Yes (attached)	[ ]	Not required	[X]	Pending (must be supplied before permission is granted)

Obtaining permission is necessary when conducting research *within the premises* of a particular site such as an ethnography of the functioning of a supermarket or a school, or the way staff interact with clients in a clinic, or of how the HIV Unit in the City of Johannesburg functions. Please read the detailed guidelines on the Ethics website http://web.wits.ac.za/Academic/Research/Applications.htm

4. How will data on human research participants be collected (instruments, methods, procedures)? (Attach instruments as an appendix)

[ ]	In written format (e.g. questionnaires, diagnostic tests, etc.)
[ ]	Completion of on-line instruments (e.g. questionnaires)
[ ]	Individual interviews (e.g. structured, semi-structured, etc.)
[ ]	Group interviews (e.g. seminar/discussion groups, focus groups, etc.)
[ ]	Ethnographic observation, participant observation, other informal descriptive, and/ or interactive methods
[ ]	Community-based methods or techniques such as drama workshops, community theatre, training workshops, participant rural appraisal (PRA), rapid rural appraisal (RRA), etc.
[ ]	Research on/in therapeutic or counselling contexts
[ ]	Observation of public performance, and/or public behaviour observation
[ ]	Photography, video and/or audio recording (**specific separate consent forms may be required**)
[X]	Other research methods or techniques (specify in this line). Online questionnaire

Brief details of instruments to be used (attach instrument or draft to this application)

The instrument which will be used during the course of this study will be a self-designed mixed method questionnaire, involving both open and closed ended questions and will be used to ascertain the perceptions which parents hold around cognitive assessment measures as used in relation to their children and why it is that they have developed these attitudes. The closed ended portion of the questionnaire, where the perceptions around cognitive assessment measures and experiences with cognitive assessment and therapy will be interrogated, will involve a series of closed ended question, inviting yes or no answers from participants determining how they feel about the effectiveness and appropriateness of cognitive assessment measures. More open ended questions will explore participants' yes and no answers further by inviting them to elaborate and explain their answers in more depth. The first portion of the questionnaire, which will ascertain demographic information, will also include closed ended questions. The final portion of the questionnaire will allow respondents to elaborate further on the answers they gave in the second portion by inviting them to discuss their own experiences with cognitive assessment measures and psychotherapeutic interventions in general and also to share how they feel that these measures and these interventions can be altered to become more appropriate to the wider population.

5. Who will the research participants be?				
The sample will consist of approximately 100 participants, who will represent the population of parents of school age children, particularly parents of primary school children. These parents will be accessed through schools, once permission has been attained from the Gauteng Department of Education and from the headmasters of the involved schools who will be asked to send out a communication to parents informing them of the research and inviting them to participate by distributing a parent information form. The sample will comprise a non-probability purposive sample.				
Does this research expose either the participant or the researcher to any potential risks or harm that they would not otherwise be exposed to?	X	Yes		No
If 'yes', explain: The parents will be exposed to a discussion of their own experiences with cognitive assessment measures and psychological interventions from their experiences and those of their children. This will require the provision of referral information to assessment organisations.				
Will research involve vulnerable categories?		Yes	X	No
If so, state which ones:				
How will any existing vulnerabilities among research participants be addressed? While the sample will not represent a vulnerable population, the questionnaire will require that participants consider and discuss sensitive details regarding their experiences with assessment and psychotherapy, the questionnaire will include referrals to organisations offering assessment and counselling services.				

NB: The term 'vulnerable categories' includes, among others, children under 18, orphans, prisoners, persons with cognitive or communication disorders, people who are traumatised or currently in traumatic situations.

Where necessary, include details of steps to be taken to facilitate data collection across language barriers (e.g. interpretation or translation).

6. How will informed consent be obtained?

How will potential participants be identified / selected / recruited?

Once permission has been obtained from the principals of the schools who will be involved in the study, parents will be send (potentially via email) an information letter and questionnaire, inviting them to partake in the study.

What will participants be told about the research (including the promises to be made)?

Firstly, the participants, in addition to the school headmasters, will be informed of the voluntary nature of the study, including their right to participate in the study voluntarily and to leave the study up until questionnaires have been posted.

Participants will also be assured that both confidentiality and anonymity will be maintained during the course of the study as they will not be required to attach any identifying information to the questionnaire. They will also be informed, additionally, that their names and the names of the schools involved, will not be included in the research report and subsequent publications thereof.

The participants will also be informed of how the data will be handled following collection in that it will be kept on a password locked computer.

How will informed consent be obtained?

[ ]	Formal (Signed form)	[ ]	Informal (e.g. verbal)	[X]	Other

Briefly explain your strategy for ensuring informed consent

Participants will be informed that once they have submitted their completed questionnaires, they consent to partake in the study of for the information provided to be used for research purposes.

Attach *Participant Information Sheets* and *Consent Forms* for each sample group, and/or other related materials

NB: ***Consent*** in social science and humanities research involving human participants: Where informal ethnographic or participant observation methods are used, or where signed *Consent Forms* are not possible, or for research involving group contexts (focus group, Participant Rapid Assessment, Rapid Rural Appraisal, public performance, workshops) **state how the quality of informed consent will be assured.** It is essential that participants in research be fully informed and agree, on this basis, to participate in the research.

7. Protecting participant identities

Can **confidentiality** be guaranteed?	[x]	Yes	[ ]	No
Can **anonymity** be guaranteed in resulting reports, theses and/or publications?	[x]	Yes	[ ]	No

Explain how this will be done? (What will participants be told in this regard?)

Confidentiality will be maintained by not requiring participants to include any identifying information on their questionnaires. The names of participants and schools will therefore not be included in the research report and all of its subsequent publications. The IP address will also be removed.

NB: While confidentiality may be desirable, it cannot be guaranteed in, for example, focus groups, or ethnographic observation. Similarly anonymity should be preserved in questionnaires, but cannot be offered in workshop methodologies, focus group research, etc. Participants should have the right to remain anonymous in the final report, and this must be respected in handling of all data relating to them. Participants need to be informed about these issues.

8. Protection of data during and after the research

How will the data be protected while the research is in progress? (This includes how the identities of participants will be protected).

The raw data collected will be in digital format and will be kept on a password protected computer.

What is to be **done with the research data** after completion of the project?

[ ]	Stored in archives (specify)	[ ]	Stored in on-line data base (specify)
[x]	Stored in password protected computer	[ ]	Stored in digital form with all identifying feature removed
[ ]	Will be kept indefinitely for research purposes		

Explain how the data will be securely stored during this time

The raw data will be stored on a password protected computer. The data will be kept after the study has concluded for possible use on future studies related to the topic. Participants will be informed that the data will be kept for future use and the submission of an online questionnaire will be taken as consent for the data collected to be kept by the University of the Witwatersrand and used in future research.

NB: 'Raw' or unprocessed data, especially **where the identity or personal data of research participants is included, must be safeguarded** and preserved from unauthorised access. Data may be destroyed after use, but **preservation in an archive or personal collection** may also be appropriate, desirable or even essential. For instance, data sets that contain **historically important information** or information that relates to **national heritage** must be preserved and should be placed in a public archive where possible and appropriate.

All data should be preserved in a way that **respects the nature of the original participants' consent**. If you are unsure about the procedure of data management and storage, please contact Nina Lewin (ninalewin@gmail.com)

9. Access to the research results / reports

How will the results be **reported**?

The results of the study will become part of a final research report which will be archived in the main library of the University of the Witwatersrand and will also be made available online on the Institutional Repository Environment of Wits on WIReDSpace. The report might be published subsequently in journal articles or presented at conferences

Who will have access?

The report and the results will be made accessible to the public once it is made available in the University's main library.

Conference presentations will be available to all those who attend and peer-reviewed journal articles to those who subscribe to these.

A summary of the findings will be made available to the respective schools and parents upon request.

Note: All Wits Masters and PhDs are stored in the main library as well being made available on the www.

SIGNATURES (REQUIRED)

In signing this form, the researcher and supervisor (if any) of this project undertake to ensure that any amendments to this project that are required by the Human Research Ethics Committee are made before the project commences.

Declaration: We, the signatories, declare that all information on this form is correct and that we will strive to maintain the highest ethical standards in this research at all times, according to disciplinary and university expectations, recognising that ethical practice in research is always a continuing process.

	Date	Name	Signature

Applicant	04/02/2018	Sean Neveling	
Supervisor	04/02/2018	Adri Vorster	

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

HUMAN RESEARCH ETHICS COMMITTEE (SCHOOL OF HUMAN & COMMUNITY DEVELOPMENT

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER: MEDP/18/007 IH**
PROJECT TITLE:	The perceptions of parents towards the Cognitive Assessment of their children
INVESTIGATORS **DEPARTMENT**	Neveling Sean Psychology
DATE CONSIDERED	29 May 2018
DECISION OF COMMITTEE*	Approved

This ethical clearance is valid for 2 years and may be renewed upon application

DATE: 29 May 2018

CHAIRPERSON
(Dr Zaytoon Amod)

cc Supervisor: Ms Adri Vorster
Psychology

DECLARATION OF INVESTIGATOR (S)

To be completed in duplicate and **one copy** returned to the Secretary, Room 100015, 10th floor, Senate House, University.

I/we fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure be contemplated from the research procedure, as approved, I/we undertake to submit a revised protocol to the Committee.

This ethical clearance will expire on 31 December 2020

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

F o r

GDE RESEARCH REQUEST FORM

REQUEST TO CONDUCT RESEARCH IN INSTITUTIONS AND/OR OFFICES OF THE GAUTENG DEPARTMENT OF EDUCATION

1. PARTICULARS OF THE RESEARCHER

.1	Details of the Researcher	
	Surname and Initials:	SP Neveling
	First Name/s:	Sean Patrick
	Title (Prof / Dr / Mr / Mrs / Ms):	Mr
	Student Number (if relevant):	1478325
	ID Number:	9408185048085

.2	Private Contact Details	
	Home Address	***Postal Address (if different)***
	65 sixth street, Parkmore	
	Sandton	

Johannesburg	
Gauteng	
Postal Code: 2196	***Postal Code:***
Tel: 011 783 6357	
Cell: 079 513 6698	
Fax:	
E-mail: 1478325@students.wits.ac.za	

2. PURPOSE & DETAILS OF THE PROPOSED RESEARCH

.1	**Purpose of the Research (Place cross where appropriate)**
Undergraduate Study - Self	
Postgraduate Study - Self	X
Private Company/Agency – Commissioned by Provincial Government or Department	
Private Research by Independent Researcher	
Non-Governmental Organisation	
National Department of Education	
Commissions and Committees	
Independent Research Agencies	
Statutory Research Agencies	
Higher Education Institutions	

.2	**Full title of Thesis / Dissertation / Research Project**
The Perceptions of Parents Towards Cognitive Assessment Measures	

.3	**Value of the Research to Education (Attach Research Proposal)**
See attached	

2.4	**Proposed date of completion of study / project and submission of research findings to GDE**
Completion date:	November 2018
Submission to GDE date:	February 2019

.5	**Student and Postgraduate Enrolment Particulars (if applicable)**
Name of institution where enrolled:	University of the Witwatersrand
Degree / Qualification:	Masters in Education (Educational Psychology)
Faculty and Discipline / Area of Study:	Psychology

Name of Supervisor / Promoter:	Adri Vorster

.6	**Employer (where applicable)**	
	Name of Organisation:	
	Position in Organisation:	
	Head of Organisation:	
	Street Address:	
	Postal Code:	
	Telephone Number (Code + Ext):	
	Fax Number:	
	E-mail:	

.7	**PERSAL Number (where applicable)**

3. PROPOSED RESEARCH METHOD/S

(Please indicate by placing a cross in the appropriate block whether the following modes would be adopted)

3.1 Questionnaire/s (If Yes, supply copies of each to be used)

YES	**X**	**NO**	

3.2 Interview/s (If Yes, provide copies of each schedule)

Y **ES**		**N** **O**	**X**

3.3 Use of official documents

Y **ES**		**N** **O**	**X**
If Yes, please specify the document/s:			

3.4 Workshop/s / Group Discussions (If Yes, Supply details)

YES		**NO**	**X**

3.5 Standardised Tests (e.g. Psychometric Tests)

YES		**NO**	**X**
If Yes, please specify the test/s to be used and provide a copy/ies			

4. INSTITUTIONS TO BE INVOLVED IN THE RESEARCH

4.1 Type of Institutions (Please indicate by placing a cross alongside all types of institutions to be researched)

INSTITUTIONS	**Mark with X here**
Primary Schools	X
Secondary Schools	
ABET Centres	
ECD Sites	

LSEN Schools	
Further Education & Training Institutions	
Other	

4.2 Number of institution/s involved in the study (Kindly place a sum and the total in the spaces provided)

Type of Institution	Total
Primary Schools	TBA
Secondary Schools	
ABET Centres	
ECD Sites	
LSEN Schools	
Further Education & Training Institutions	
Other	
GRAND TOTAL	

4.3 Name/s of institutions to be researched (Please complete on a separate sheet if space is found to be insufficient)

Name/s of Institution/s
[redacted]
[redacted]
[redacted]

5

4.4 **District/s where the study is to be conducted**. ***(Please indicate by placing a cross alongside the relevant district/s)***

District	
Ekhuruleni North	
Ekhuruleni South	
Gauteng East	
Gauteng North	
Gauteng West	
Johannesburg Central	
Johannesburg East	
Johannesburg North	**X**
Johannesburg South	
Johannesburg West	
Sedibeng East	
Sedibeng West	
Tshwane North	
Tshwane South	
Tshwane West	

If Head Office/s (Please indicate Directorate/s)



6

4.5 Number of learners to be involved per school (Please indicate the number by gender)

Grade	1		2		3		4		5		6	
Gender												
Number												

Grade	7		8		9		10		11		12	
Gender												
Number												

4.6 Number of educators/officials involved in the study (Please indicate the number in the relevant column)

Type of staff	*Educators*	*ODs*	*Deputy Principals*	*Principal*	*Lecturers*	*Office Based Officials*
Number						

4.7 Are the participants to be involved in groups or individually?

Participation	
Groups	
Individually	X

4.8 Average period of time each participant will be involved in the test or other research activities (Please indicate time in minutes)

Participant/s	Activity	Time
Parents	Questionnaires	30 minutes

4.9 Time of day that you propose to conduct your research.

Before school hours	During Break	After School Hours X

4.10 School term/s during which the research would be undertaken

First Term	Second Term	Third Term
X	X	

CONDITIONS FOR CONDUCTING RESEARCH IN GDE

Permission may be granted to proceed with the above study subject to the conditions listed below being met and may be withdrawn should any of these conditions be flouted:

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 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.***

DECLARATION BY THE RESEARCHER	
1. I declare that all statements made by myself in this application are true and accurate.	
2. I accept the conditions associated with the granting of approval to conduct research and undertake to abide by them.	
Signature:	
Date:	

NB. If a group of Students / Researchers will be conducting the same research in the same / different GDE Institutions, Annexure A (attached) must be completed and signed by each researcher.

DECLARATION BY SUPERVISOR / PROMOTER / LECTURER	
I declare that: Sean Neveling	
1. is enrolled at the institution / employed by the organisation to which the undersigned is attached.	
2. The questionnaires / structured interviews / tests meet the criteria of: • ***Educational Accountability*** • ***Proper Research Design*** • ***Sensitivity towards Participants*** • ***Correct Content and Terminology*** • ***Acceptable Grammar*** • ***Absence of Non-essential / Superfluous items***	
Surname:	Vorster
First Name/s:	Adri
Institution / Organisation:	University of the Witwatersrand
Faculty / Department (where relevant):	Department of Psychology, Faulty of Humanities, School of Human and Community Development
Telephone:	011 717 4554
Fax:	
E-mail:	adri.vorster@wits.ac.za
Signature:	
Date:	2018-02-14

N.B. This form (and all other relevant documentation where available) may be completed and forwarded electronically to Diane.Buntting@gauteng.gov.za The last 2 pages of this document must however have the original signatures of both the researcher and his/her supervisor or promoter. (For Group Research Annexure A, must also have original signatures.)

These pages may be faxed to (086 594 1781) or hand delivered (in a sealed envelope) to Diane Buntting, Room 509, 111 Commissioner Street, Johannesburg. All enquiries pertaining to the status of research requests can be directed to Diane Buntting on tel. no. 011 843 6503.

ANNEXURE A:

ADDITIONAL INFORMATION FOR GROUP RESEARCH

This information must be completed by **every** researcher/ student who will be visiting GDE Institutions for research purposes.

By signing this declaration, the researcher / students accepts the conditions associated with the granting of approval to conduct research in GDE Institutions and undertakes to abide by them.

Supervisor/ Promoter / Lecturer's Surname and Name……

DECLARATION BY RESEARCHERS / STUDENTS:

Surname & Initials	**Name**	**Tel**	**Cell**	**Email address**	**Signature**

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE RESEARCH APPROVAL LETTER

Date:	**04 June 2018**
Validity of Research Approval:	**05 February 2018 – 28 September 2018** **2018/93**
Name of Researcher:	**Neveling S.P**
Address of Researcher:	**65 sixth Street, Parkmore**
	Sandton
	Johannesburg, 2196
Telephone Number:	**011 783 6357 079 513 6698**
Email address:	**1478325@students.wits.ac.za**
Research Topic:	**The Perceptions of Parents Towards Cognitive Assessment Measures.**
Type of qualification	**Master's in Education**
Number and type of schools:	**Two Primary Schools**
District/s/HO	**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:

11/06/2018

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

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 outline 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

.....

Mr Gumani Mukatuni
Acting CES: Education Research and Knowledge Management

DATE: 11/06/2018

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

GAUTENG PROVINCE
Department: Education
REPUBLIC OF SOUTH AFRICA

8/4/4/1/2

GDE AMMENDED RESEARCH APPROVAL LETTER

Date:	**05 February 2019**
Validity of Research Approval:	**05 February 2019 – 30 September 2019** **2018/93A**
Name of Researcher:	**Neveling S.P**
Address of Researcher:	**65 sixth Street Parkmore**
	Sandton
	Johannesburg, 2196
Telephone Number:	**011 783 6357 / 079 513 6698**
Email address:	**1478325@students.wits.ac.za**
Research Topic:	**The Perceptions of Parents Towards Cognitive Assessment Measures.**
Type of qualification	**Masters**
Number and type of schools:	**Two Primary Schools**
District/s/HO	**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:

05/02/2019

Office of the Director: Education Research and Knowledge Management
7th Floor, 17 Simmonds Street, Johannesburg, 2001
Tel: (011) 355 0488
Email: Faith.Tshabalala@gauteng.gov.za
Website: www.education.gpg.gov.za

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 outline 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.*
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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

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Mr Gumani Mukatuni
Acting CES: Education Research and Knowledge Management

DATE: 05/02/2019

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