Educational psychologists' views on the value of the Wechsler Intelligence Scale for Children

Juli Janine Smit

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Educational psychologists' views on the value of the Wechsler Intelligence Scale for Children

By

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DECLARATION OF ORIGINALITY

I, Juli Janine Smit (student number 15034412), declare that the mini-dissertation, which I hereby submit for the degree Magister Educationis in Educational Psychology at the University of Pretoria, is my own work and has not been previously submitted by me for any degree at this or any other tertiary institution.

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Juli Janine Smit

August 2022

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- No significant changes,
- Informed consent/assent,
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- Registered title, and
- Data storage requirements.

ETHICS STATEMENT

The author, whose name appears on the title page of this dissertation, has obtained, for the research described in this work, the applicable research ethics approval. The author declares that she has observed the ethical standards required in terms of the University of Pretoria's *Code of ethics for research and the Policy guidelines for responsible research.*

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Juli Janine Smit

August 2022

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ABSTRACT

Educational psychologists' views on the value of the Wechsler Intelligence Scale for Children

By

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Supervisor: Professor Suzanne Bester

Degree: M. Ed. (Educational Psychology)

The purpose of this exploratory case study was to explore and describe the views of three educational psychologists regarding the value of the Wechsler Intelligence Scale for Children (WISC), for their clients. The conceptual framework that informed this study consists of psychometric constructs that underpin intelligence testing, such as validity, cultural fairness, reliability, and consistency. Guided by an interpretivist paradigm, this qualitative case study made use of individual interviews and field notes for data collection. The findings of this study suggest that the participants had ambivalent feelings about the value of the WISC for their clients. While the WISC was regarded as a useful intelligence test and clinical tool, the participants felt that it may lack contextual relevance when certain demographic factors, such as language, education and resources are considered. Furthermore, benefits of the WISC that were noted included regular updating and its engaging nature. However, affordability, availability and standard procedures were noted as challenges that detracted from the value of the WISC.

Key words:

- Intelligence
- Intelligence Testing
- Culture
- Wechsler Intelligence Scale for Children (WISC)
- Educational Psychologist

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To whom it may concern

This letter serves to inform you that I have done language editing, proofreading and formatting of the references on the thesis

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CHAPTER 1: INTRODUCTION

1.1 INTRODUCTION AND RATIONALE

Psychological assessment in South Africa is a topic of both contestation as well as development. International tests, most of which make use of standardised samples from across the globe, have been used in the past and are still currently being used in the South African context. How these tests are applied and administered may lack appropriateness for the diverse South African population due to the various cultural, linguistic and equal educational attainment differences that exist amongst South African children. Administrators of intelligence tests must consider the multicultural, multilinguistic and heterogenous society in which they are being used (Laher & Cockcroft, 2014).

Sunderaraman et al. (2016) argue there is a skewed belief that there is universal applicability of international intelligence tests. In South Africa, the use of these tests has in the past been politically motivated. For example, differential intelligence test scores obtained by people of colour were used as justification for the separate Bantu Education system during Apartheid (Weiten, 2016). As such, in South Africa, psychological assessment in various contexts often provokes strong opinions because of its history of being discriminatory, unfair and biased (Laher & Cockcroft, 2014).

Weiss et al. (2015b) contend that most major intelligence tests are literacy dependant, orientated towards middle-class individuals and make use of Western communication styles inappropriate for universal adoption. Furthermore, the adoption of intelligence tests that are based on international samples may not take into consideration diversity of culture, socio-economic background and educational opportunity, and thus may not produce accurate representations of intelligence in South African children (Laher & Cockcroft, 2013). However, in the last 20 years, studies have emerged that show a movement towards tests that are reliable, valid, unbiased and fair to all members of South African society as well as a need for local, emic test development and rigorous development processes to determine validity and reliability (Shuttleworth-Edwards, 2012). This signals a move away from injustices of the past to consider various influencing factors on intelligence (Laher & Cockcroft, 2013).

South Africa, as a society, is comprised of people from a variety of cultural, linguistic and religious orientations (Foxcroft, 2011), and thus, provides an ideal environment in which the applicability of international assessments can be tested. One of these tests, and the focus of this research, is the Wechsler Intelligence Scale for Children (WISC).

David Wechsler, the creator of the WISC, regarded intelligence as a critical skill required for daily adaptation to challenges (Sternberg, 2012). The WISC is currently in the fifth edition, indicating that it has undergone substantial development since its first edition in 1939 (Foxcroft, 2004; Weiss et al., 2015a). The Wechsler scales are one of the most widely used intelligence measures worldwide as they have been adopted, adapted, translated and standardised in many countries across the world (Weiss et al., 2015a).

There is a general belief that, because of its comprehensive and clinically rich nature, the WISC, in its more recent versions, has greater applicability in various cultural settings across the world (Weiss et al., 2015b). However, while studies have been done internationally regarding racial differences in scores on intelligence tests, few have been conducted in the South African context to consider the unique effect of diversity on scores. Studies on intelligence testing relevant to the South African context have been done. These include those of Lynn and Owen (1994), who considered Black-white differences on the g-factor (general intelligence), Rushton (2001) who focused on test score differences between Whites, Indians and Blacks and Zindi (1994) who conducted cross-cultural research on the WISC-R. These studies may hold limited relevance due to factors such as the timeframe in which they were conducted, the measures they considered, such as the WISC-R which has long since been replaced as well as recent developments and research in the field of intelligence testing. Thus, there is limited research on the WISC's applicability in the South African context, specifically as most studies fail to consider cultural interpretations of intelligence and other influencing factors such as linguistic ability and educational opportunity (Laher & Cockcroft, 2013). Research has been done on other Wechsler scales such as that of the Wechsler Adult Intelligence Scale-III (WAIS-III) which was standardised to a South African sample and still holds crucial relevance in the South African context. Thus, it may provide valuable insight into how current WISC revisions could be better adapted for South African use.

Previous research has highlighted lower average intelligence quotient (IQ) scores in African Black children (Rushton, 2001), a lack of cross-cultural research (Zindi, 1994) and the need for South African standardisation of the WISC (Shuttleworth-Edwards et al., 2013a). Emphasis has been placed on certain gaps that exist within the literature regarding intelligence testing and specific considerations that need to be made. These include individual education levels as well as unequal education opportunities and the potential influence on test outcomes (Shuttleworth-Edwards, 2012) as well as language barriers and cultural variations in the conceptualisation of intelligence (Scheiber, 2016). All these necessary considerations are underpinned by the diversity that exists within the South African context. This study attempts to contribute to this knowledge base by exploring the influence diversity has on the perceived value of the WISC in the South African context through gathering insights from those who regularly use it.

A study that considers educational psychologists' perceptions of the value of the WISC could perhaps prove beneficial to multiple role-players in the field of intelligence testing. It could potentially allow educational psychologists to identify both positive and negative elements of their practice as well as the potential pitfalls of the various WISCs that are routinely administered. Increased awareness of these elements could possibly lead to reflections that could improve practice.

1.2 PURPOSE OF THE STUDY

The purpose of this exploratory case study was to explore and describe the views of three educational psychologists from Gauteng regarding the value of the WISC for their clients. For this study, the WISC intelligence test will be generally defined as a clinical instrument that is individually administered to assess the intelligence of children between the ages of 6 years 0 months and 16 years 11 months (Wechsler, 2014a).

1.3 RESEARCH QUESTIONS

1.3.1 Primary Research Question

What are the views of three educational psychologists from Gauteng regarding the value of the WISC for their clients?

1.3.2 Secondary Research Questions

The study also posed the following sub-questions:

- How relevant do these educational psychologists believe the WISC is for their clients?
- What benefits do these educational psychologists believe the WISC has?
- What challenges do these educational psychologists experience regarding the use of the WISC?

1.4 WORKING ASSUMPTIONS

This study was based on the following assumptions:

- The WISC is a commonly used test in the South African context.
- Educational psychologists would be willing to provide their views on the utility and appropriateness of the WISC.
- Educational psychologists have sufficient knowledge and experience to discuss the potential concerns as well as benefits of the WISC.
- A qualitative methodology which makes use of semi-structured individual interviews will allow for richer, more detailed data as the non-prescriptive, open-ended nature allows for debate and conversation which may bring to light information that may not have been considered in the interview design process.

1.5 CONCEPT CLARIFICATION

The key concepts of the study, namely intelligence, intelligence testing and culture are clarified below.

1.5.1 Intelligence

Kezer and Arik (2012) state that intelligence can be defined as mental or cognitive abilities that allow for everyday functioning and adaptation. In the context of this study, intelligence is specifically defined in terms of intelligence as tested by a standardised instrument. The WISC primarily defines intelligence as the combination of verbal and nonverbal skills, working memory, fluid reasoning and processing speed which are used by an individual to act rationally and purposefully (Weiss et al., 2015a; Weiss et al., 2015b) while considering both crystallised and fluid intelligence which deals with

both general knowledge and flexibility of reasoning, respectively, and the ability to apply it to a variety of situations (Kezer & Arik, 2012; Sternberg, 2012; Weiten, 2016).

1.5.2 Intelligence Testing

Intelligence tests measure cognitive abilities and provide information about a person's ability to learn and their specific cognitive qualities. These individual measures are then compared to the measures of others (Lerner & John, 2015).

1.5.3 Culture

Semenya and Mokwena (2012) acknowledge the difficulty of defining culture but state a consensus exists for defining it as ways in which various groups understand their collective systems of meaning-making as well as understanding and valuing the world in which they live. Donald et al. (2020) further define culture as being fluid and a continuously changing factor that changes through social interaction. Thus, Laher and Cockcroft (2013) agree that culture cannot be reduced to any specific race or language but rather that it encompasses varying traditions, customs and values (Foxcroft, 2004).

1.6 INTRODUCING THE CONCEPTUAL FRAMEWORK SUPPORTING THE STUDY

The conceptual framework for this research study is informed by the psychometric concepts that underpin intelligence testing. These concepts include validity and fairness, specifically cultural fairness, reliability and consistency. All psychometric measures need to meet the criteria of reliability and validity (Foxcroft & Roodt, 2013).

Due to the diversity of the South African context in which this research took place these concepts are essential to consider as diversity is accompanied by a variety of challenges. The underpinning concepts of intelligence testing will guide the academic argument of this study.

Validity refers to the extent to which a psychometric measure measures what it sets out to measure and can be considered one of the most important constructs in psychometric testing (Pietersen & Maree, 2016). It is thus an important consideration in research as the primary purpose of a research study is to answer the proposed research question thus ensuring the study investigates what it sets out to investigate (Price, 2017).

Furthermore, cultural fairness needs to be taken into consideration as culture and its influence on language, perceptions of intelligence and practices may influence how a test can measure intelligence (Sunderaraman et al., 2016). This includes consideration of potential bias, language and practices in the development, administration and scoring of intelligence tests (Coulacoglou & Saklofske, 2017). This study sought to explore the extent to which the WISC is deemed relevant by educational psychologists, for use with their clients, giving rise to its perceived validity.

Reliability refers to the extent to which a test is repeatable, consistent and free of errors of measurement (Pietersen & Maree, 2016; Price, 2017). Reliability can only be established if there is consistency in the scores over time and in different contexts (Price, 2017). For the purposes of this research, the consistency in scores as perceived and experienced by the participants in this study in relation to their clients allowed for a description of the value of the test.

The conceptual framework is discussed in greater detail in Chapter Two.

1.7 OVERVIEW OF THE RESEARCH METHODOLOGY, APPROACH AND PROCESS

Table 1.1. provides an overview of the meta-theoretical and research paradigms that underpinned and guided this study. The table also outlines the research processes through the inclusion of a summary of each of the following: the research design, the binding of the case in terms of participants and site selection, data generation, data documentation, data analysis and interpretation, strategies to ensure trustworthiness and ethical considerations. The research methodology, approach and process are discussed extensively in Chapter Three.

Table 1.1: Overview of research methodology, approach and process

RESEARCH QUESTIONS					
Primary research question					
What are the views of three educational psychologists from Gauteng regarding the value of the WISC for their clients?					
Secondary research questions					
• How relevant do these educational psychologists believe the WISC is for their clients? • What benefits do these educational psychologists believe the WISC has? • What challenges do these educational psychologists experience regarding the use of the WISC?					
Overview of research methodology, approach and process					
Meta-theoretical and methodological paradigms	Research design	Binding of the case in terms of participants	Data generation	Data documentation	Data analysis and interpretation
- Interpretivism - Qualitative research	- Exploratory case study design	- Purposive selection of participants	- Semi-structured individual interviews - Field notes	- Audio data documentation - Interview transcription - Field notes	- Inductive thematic analysis following the phases per Braun and Clarke (2006)

Strategies to ensure the trustworthiness of the study				
Credibility: extensive research, triangulation, crystallisation, rapport establishment	Transferability: rich detailed descriptions, clear inclusion criteria	Dependability: audit trail, field notes, audio recordings, verbatim transcriptions	Confirmability: meticulous record keeping, personal reflections, monitoring bias	Authenticity: fairness, clarification and honouring of constructions.
Ethical considerations				
- Permission to conduct research, informed consent, voluntary participation and deception - Privacy, confidentiality and anonymity - Respect, integrity and truthfulness				

1.8 CONCLUSION

In this chapter, the study is introduced by providing the rationale behind the study as well as the purpose. Furthermore, it included the foundational guiding aspects of the study, namely the research questions and conceptual framework with clear concept clarifications. An overview of the research methodology, approach and process that was followed, including strategies for trustworthiness and ethical considerations were introduced.

The next chapter will review the literature regarding the various challenges and advancements of intelligence testing as well as specifically review the literature on the WISC as a valid and reliable measure.

CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

This literature review presents the various factors and challenges that influence the development of intelligence in South African individuals and by implication intelligence testing in South Africa. This discussion is necessary as it foregrounds the diversity in terms of culture, language, education as well as various social challenges that exist for South African children. Additionally, logistical challenges in the administration of intelligence tests are also considered. Current advancements in intelligence testing will also be discussed and how these developments influence the process of intelligence testing in the South African context. A discussion of the WISC both internationally and within South Africa will follow. This discussion will consider how the WISC is made appropriate and culturally sensitive for international samples which is necessary to understand its applicability in the heterogeneous South African context. The conceptual framework will foreground concepts identified in the literature review and will be discussed in terms of its underpinning concepts of validity, reliability, consistency and cultural fairness.

2.2 CHALLENGES WITH INTELLIGENCE TESTING IN SOUTH AFRICA

South Africa is a uniquely diverse country made up of various cultural, linguistic and ethnic groups. It is in this context of diversity that different experiences, in terms of education, socio-economic status, healthcare and stimulation are observed. It is necessary to consider how the various aspects of diversity have the potential to influence the development of intelligence and thus potentially pose a challenge to intelligence testing in the South African context.

2.2.1 Culture as a Challenge

Sunderaraman et al. (2016) highlight that diversity presents many challenges for the measurement of intellectual functioning. South Africans come from a variety of cultural backgrounds, and it is this diversity that makes the development and use of tests that are valid and fair to all groups in the country a challenge, but vitally important (Laher & Cockcroft, 2013). Culturally fair intelligence tests are of great importance as a lack

of acknowledgement of how impoverishment, segregation and educational disadvantages may affect the IQ scores of test-takers could potentially hold damaging and demeaning effects (Sunderaraman et al., 2016).

The concept of culture is extraordinarily complex and cannot be reduced merely to race as it includes language, ethnicity, traditions, customs, world views and behaviour (Sternberg, 2021). Culture has a direct influence on the behaviour, understanding and perspectives of people (Laher & Cockcroft, 2013). Thus, items that are included in an intelligence test could be interpreted in a variety of ways by different people of different cultures (Lozano-Ruiz et al., 2021). Parrits and Troy (2014) emphasise the importance of considering culture not as in the background of development but rather as a major influence on development and thus intelligence.

Moleko (2012) posits that South Africa is a multicultural society with much of the population having collectivistic values in which the needs of the individual are placed below those of the group. However, this is not the case for all members of South African society as groups of other cultures and values exist (Shuttleworth-Edwards, 2012). Shuttleworth-Edwards (2012) indicates that in addition to the collectivistic-individualistic diversity that exists, heterogeneity exists within various ethnic groups as well. It is thus important to consider the extent to which a test is culturally appropriate to all these groups. Laher (2019), however, acknowledges that there are very few culturally relevant tests that accommodate the diversity in South Africa.

Weiss et al. (2015a) highlight that actions and behaviours that are deemed intelligent may vary across cultures. Thus, what may be viewed as intelligent behaviour by one grouping of people may not be seen as such by another (Sternberg, 2021). In some cultures, intelligence may be indicated in the ability to resolve conflict, grow nutritious crops or survive in a dangerous neighbourhood. However, if an IQ score obtained from a test is based on the intellectual functioning of well-educated individuals who have different indicators of intelligence, rather than the intellectual functioning of an individual similar to the one taking the test, then the test is biased (Lozano-Ruiz et al., 2021; Sunderaraman et al., 2016). Thus, while intelligence tests are able to predict academic achievement well, they do not necessarily predict things that every culture would value as intelligent behaviour (Weiss et al., 2015a). Foxcroft (2011) agrees that

construct equivalence – whether a test developed for a certain culture measures the same construct in another – is vitally important when considering the effect of culture on intelligence. Additionally, it is important that the nature of the test be culturally appropriate (Foxcroft, 201; Lozano-Ruiz et al., 2021). This implies that the tasks to be completed be culturally appropriate, for example, playing with wooden blocks rather than completing a pen-and-paper task that may be unfamiliar (Foxcroft, 2011).

Foxcroft (2011) posits that tests are closely linked to the context in which they are developed, which informs how the test is interpreted. Often, test developers argue for the universal applicability of their instruments (Laher & Cockcroft, 2013). Thus, the majority of the intelligence tests used in South Africa, which have Western origins, are far more individualistic in their focus which may negatively affect the results obtained by various South Africans (Foxcroft, 2004; Sternberg, 2021; Tan et al., 2021). Additionally, using international norms could result in high diagnostic rates of impairment in otherwise healthy South Africans. Shuttleworth-Edwards (2012) acknowledges that it is a well-recognised problem that if tests developed in the United States (US) or United Kingdom (UK) are unconditionally accepted for use on diverse local populations, they may have questionable reliability and validity and may result in high rates of misdiagnosis (Lozano-Ruiz et al., 2021).

Another potential issue pertaining to culture and intelligence testing in the South African context is that of acculturation. Acculturation is the result of people from different cultural backgrounds coming into continuous contact, thus resulting in changes in the original cultural patterns of the other group (Laher & Cockcroft, 2013; Tan et al., 2021). Laher and Cockcroft (2013) argue that even though the general perception is that African individuals are acculturated into the White, Western culture, it has become increasingly evident, since the end of Apartheid, that acculturation is happening in both directions. Additionally, acculturation results in heterogeneity within ethnic/cultural groups (Shuttleworth-Edwards et al., 2013a).

However, the multilingual, multicultural diversity of the South African population provides a perfect environment for international test validity and reliability to be tested (Laher & Cockcroft, 2013). Laher and Cockcroft (2013) state that, in South Africa, culture is often a euphemism for race. Thus, ‘culture’ may be used interchangeably

with certain racial or linguistic groupings. It was this type of classification that justified many of the Apartheid division practices as lower scores obtained by children of colour were used as evidence of intellectual inferiority (Laher & Cockcroft, 2014). This served as the foundation of Bantu Education and other separate development practices (Laher & Cockcroft, 2014).

These racial-cultural 'groups' such as Blacks, Indians and Coloureds and their previous divisions are consistent with the divide that continues to persist in the South African context. This is evidenced by the development and existence of two economies, one characterised by advantage, access and availability and the other by disadvantage, limited access and availability of resources and quality education (Laher, 2019). Laher and Cockcroft (2014) assert that testing cannot be viewed separately from a country's past, be it political, social or economic. The correlation between culture, race and historical experience has given rise to different experiences that further influence the development of intelligence testing in the South African context. Educational attainment opportunity differences are some of the most influential to the development of intelligence.

2.2.2 Education as a Challenge

South African society remains unequal with much of the population still not having access to adequate resources, opportunities and education. Most notable of these is unequal access to quality education as this has a direct effect on the scores obtained on standardised intelligence tests (Foxcroft, 2011).

This distinction of education quality originates from the Apartheid division of education which today remains true, with township schools being grossly under-resourced and thus providing a lower quality of education than previous Model C schools (Mpu & Adu, 2021; Shuttleworth-Edwards, 2012). However, it is necessary to note that while township schools may carry the stigma of being disadvantaged, many schools in South Africa are currently deemed ineffective or dysfunctional due to elements such as poor management and an ineffective education system thus further leading to poorer quality education (Pretorius, 2014). This difference in the quality of education has resulted in a 20-30 IQ points lowering in those with disadvantaged education (Shuttleworth-Edwards, 2012).

Additionally, van Eeden (2018) states that environments characterised by unequal resources and opportunities, which were previously based on racial categories, have and continue to negatively affect intelligence and other psychometric testing. Laher and Cockcroft (2013) posit that quality of education can be even more discriminating than race when considering intelligence test performance. Shuttleworth-Edwards (2012) further agrees that emphasis should be placed on considering how deprived versus privileged education may affect scores on intelligence tests.

Under-resourcing and overcrowding in deprived educational environments are accompanied by poor sanitation and greater health risks where children often come to school hungry, tired and lacking concentration skills, influencing attendance and successful learning (de Jager, 2017; Mpu & Adu, 2021). Foxcroft (2011) further highlights that these conditions and the resulting physical state of the learner directly influence the performance of the test-taker. Additional compounding challenges are those of underqualified teachers, ineffective teaching, teachers teaching in their second or third language and a general lack of appropriate facilities and learning materials (de Jager, 2017; Mpu & Adu, 2021; Shuttleworth-Edwards, 2012).

Quality of education affects the ability to read, write and work with numbers which are all critical cognitive skills in intelligence testing (Foxcroft, 2004; Ritchie & Tucker-Drob, 2018). This is because poorer quality education implies a lack of opportunities to develop various academic proficiencies and cognitive skills concerning those with a more advantaged education (Foxcroft, 2004).

This educational divide was previously, under the Apartheid regime, exclusively along racial lines but since the end of Apartheid, non-white learners have increasingly been attending private and previous Model C schools. Thus, educational differences no longer only exist between racial/ethnic groups but due to increased accessibility to quality education and better educational opportunities, educational differences can now be observed within cultural groupings, between different members of the same group (Shuttleworth-Edwards et al., 2013b).

Furthermore, education also has a direct effect on language development, which too poses a challenge for intelligence testing. There is a dynamic interplay between

language, culture and thoughts on a practical level (Laher & Cockcroft, 2013). Therefore, language presents a particular challenge in the South African context.

2.2.3 Language as a Challenge to Intelligence Testing

Due to the existence of 11 official languages – soon to be 12 - as well as diverse dialects in the South African context, English tests are often administered to those who do not speak English as a first or even second language (Department of Justice and Constitutional Development, 2022; Foxcroft, 2004). English is spoken by less than 10% of the population as a mother tongue in South Africa, making it the 6th most common language used (Evans, 2015; Statistics South Africa, 2022). From an ethical perspective, test-takers should be allowed to exercise their right to be assessed in their home language, but this poses many challenges due to the limited availability of linguistically diverse tests (Foxcroft, 2011).

Language barriers pose a challenge for practitioners in interpreting whether poor achievement is due to lower intelligence or lack of linguistic understanding (Foxcroft, 2004; Laher & Cockcroft, 2013). Moreover, solutions to the issues related to language, such as the use of interpreters or translated tests, pose additional challenges. These challenges include a lack of words in the target vocabulary that will convey the same meaning and/or human influence in the way the questions are posed, which potentially could invalidate the answers given (Foxcroft, 2011).

Weiss et al. (2015a) emphasise that differences in education are important considerations as one's education has lifelong consequences and has the potential to influence one's socio-economic status, opportunities and lifestyle.

2.2.4 Socio-economic Status as a Consideration in Intelligence Testing

Education determines if and where one goes for tertiary education and thus the job one gets. This in turn influences where one lives and sends one's children to school. This creates a perpetuating cycle and thus the effect of socio-economic status on education and by implication, intelligence, is noteworthy. Parental occupations, family income and other socio-economic factors have a high correlational effect on children's education, literacy development as well as social environment, all of which could

potentially contribute to the development of intelligence and therefore IQ scores (Laher, 2019).

It is important to note that ethnicity/race and socio-economic status are very much correlated and thus what might appear as a racial difference may actually be due to poverty or educational inequality (Weiss et al., 2015a). This is because, for some, the divisions of South Africa's past have created a continuous cycle of poverty that provides little opportunity for escape (Laher & Cockcroft, 2013). Additionally, socio-economic status may exacerbate developmental and emotional differences between children.

Laher and Cockcroft (2013) contend that socio-economic indicators should be considered in assessment rather than race or ethnicity when evaluating scores. According to Edwards and Fuller (2005), many studies on ethnic differences in IQ have been criticised for their failure to consider socio-economic status when comparing intelligence test scores across ethnic groups.

The correlation between race/ethnicity, culture and historical events has given rise to other social factors needing to be considered when evaluating the utility of intelligence testing in South Africa. Donald et al. (2020) indicate that poverty leads to various social problems, disabilities and learning difficulties. Additionally, poverty both directly and indirectly contributes to barriers to learning and thus the development of intelligence.

2.2.5 Social Challenges Influencing Intelligence Testing

Poverty leads to inadequate availability of facilities and resources (Donald et al., 2020; Nel, 2017). This lack of resources and facilities has the potential to result in various social challenges such as substance abuse, risk-taking behaviour, HIV/AIDS and child neglect or even abuse (Donald et al., 2020; Nel, 2017). It is necessary to consider how these may affect the development of intelligence in children and thus their potential intelligence test scores.

Substances such as alcohol or drugs that are taken during pregnancy may result in a variety of health issues such as Foetal Alcohol Syndrome. A disorder which will have long-term effects on the child's ability to concentrate and learn as well as result in difficulty with higher-order functions such as planning and problem solving (Donald et

al., 2020). The use of substances as well as other risk behaviours increase the likelihood of HIV infection (Donald et al., 2020; Nel, 2017).

HIV/AIDS is both a medical and social problem of monumental proportions in the South African context. According to the mid-year estimations made by Statistics South Africa, of the approximately 60 million South African citizens, 8.23 million citizens are HIV-positive (Statistics South Africa, 2021). Furthermore, at its peak in 2006, the HIV pandemic contributed to 40% of deaths in South Africa (Statistics South Africa, 2021). It is thus necessary to consider how the presence of HIV/AIDS in the household could affect intellectual development.

HIV/AIDS can both, directly and indirectly, affect children (Kammerer et al., 2013). Directly, HIV-infected children are at greater risk of developmental delays and deficits in multiple domains of functioning (Kammerer et al., 2013). Indirectly, HIV-exposed children are often part of the very emotionally distressing process of nursing their ill family members (Donald et al., 2020). Additionally, the conditions of poverty often result in younger, able-bodied family members missing or even leaving school to seek employment or to help the family (Donald et al., 2020; Kammerer et al., 2013). Environmentally, HIV-exposed children are also at greater risk of living in low-stimulation environments (Kammerer et al., 2013).

The most devastating outcome of the HIV/AIDS pandemic is orphanhood. According to the South African Child Gauge Report (Hall, 2019) by 2018, there were 2.7 million orphans in South Africa. This accounts for 14% of all children in South Africa (Hall, 2019). Another common co-occurring problem is that of child-headed households (Donald et al., 2020). These children also face a variety of challenges related to disrupted education, low stimulation from their home environment and additional responsibilities that may limit their opportunities for intellectual development (Donald et al., 2020).

In circumstances characterised by poverty, parents are often at work for long periods to provide for their families which leads to a variety of indirect issues that have the potential to influence the development of intelligence (Donald et al., 2020; Nel, 2017). Children may be left unattended, resulting in households characterised by low

stimulation. Additionally, parents may be physically and emotionally exhausted which may lead to neglect (Donald et al., 2020).

Beyond the challenges brought on by diversity, intelligence testing also faces administration challenges in a country characterised by vast diversity.

2.2.6 Logistical and Ethical Challenges of Intelligence Testing and Administration

The Employment Equity Act recognises the results of Apartheid, its discriminatory laws and its effect of creating disadvantages for certain people. It aims to rectify these by stipulating that all psychological instruments used in South Africa should be reliable, valid, unbiased and fair for all groups within South Africa (Laher & Cockcroft, 2013). It is mandated that the Psychometrics Committee of the Health Professions Council of South Africa (HPCSA) evaluate tests to determine whether they are reliable, fair and valid before registering them for use in psychological practice (Department of Labour, 1998).

However, due to the historical marginalisation of psychological testing in the academic curriculum, only a few people have the required skills to analyse and create new and existing tests (van Eeden, 2018). Practitioners require specific skills and competencies that span the entire testing process. These include knowledge of psychometrics and testing, a sound understanding of broader social, cultural, linguistic and educational context and how these may affect testing. Additionally, practitioners require knowledge on how to interpret results and appropriately use them (Foxcroft, 2011).

In South Africa, it needs to be considered whether the norms against which scores are compared, are in fact, appropriate. The applying of norms developed elsewhere, even with caution, could lead to incorrect decisions being made based on the results (Foxcroft, 2011; Lozano-Ruiz et al., 2021). Moreover, test results need to be interpreted in relation to background factors such as cultural and family background, level of education and literacy levels. This has resulted in the movement towards more comprehensive batteries of tests and the use of qualitative methods to allow for the inclusion of culture and its potential influence on intelligence (Foxcroft, 2011.)

Additionally, Laher (2019) indicates that, due to the cost of assessment and availability of practitioners who can administer assessments, assessment typically caters for more advantaged parts of the population. In the South African context, these parts of the population are demographically more similar to Western populations.

Increased computer-based testing poses a particular challenge in the economically diverse population of South Africa as there are varying degrees of access to technology and thus computer familiarity (Khoshsima et al., 2019). This has the potential to negatively influence scores obtained on computer-based assessments (Foxcroft & Davis, 2006; Khoshsima et al., 2019). Tredoux (2013) points out that while computerised testing may hold many benefits such as limiting administrator errors and relatively lower costs it still poses a challenge in the South African context. Tredoux (2013) argues that the fact that some in the South African context have had access to devices while others have not created an inequality which raises concerns about the fairness of administering tests in this way. Additionally, computer-based testing requires vigilance on part of the test administrator to monitor for any discomfort with the method of administration (Tredoux, 2013).

Despite the challenges the process of intelligence testing has faced and continues to face, there have been various advancements in the field that indicate a striving towards greater inclusivity and the rectification of past practices.

2.3 ADVANCEMENTS IN INTELLIGENCE TESTING

Due to Westernised tests being unapologetically used with children of colour to justify segregation and separate development as well as many other Apartheid practices, international censure and sanctions were put in place in an attempt to bring these practices to an end (Laher & Cockcroft, 2014). These sanctions and censures from countries such as the US and UK limited South African access to intelligence tests which increased emic or local testing between the 1960s and 1980s (Laher & Cockcroft, 2014). By the end of the 1980s, increased attention was paid to issues of bias, equivalence and fairness and it became crucial to develop tests that applied to the South African context. However, this resulted in tests that were only standardised for English- and Afrikaans-speaking South African children (Laher & Cockcroft, 2014; Shuttleworth-Edwards et al., 2013b). It is in this period that the development,

adaptation and standardisation of tests such as the Wechsler Adult Intelligence Scale was seen (Shuttleworth-Edwards et al., 2013b). This indicated an awareness globally of the need for culturally relevant and appropriate tests (Laher & Cockcroft, 2014; Weiss et al., 2015b).

South Africa, as stated earlier, lacks the resources, both human and financial, for the creation of emic tests. Funding for psychological services and the development of tests are less likely to be given priority over issues such as HIV/AIDS, poverty and crime. Additionally, there are few appropriate environments for testing, test materials may be old or incomplete and there is a limited national budget for the purchasing of upgraded materials (Laher & Cockcroft, 2013). The development of local, emic tests could offer a solution to address these challenges as they would allow for more affordable alternatives (Laher & Cockcroft, 2013).

It is highlighted by van Eeden (2018) that various acts such as the South African Schools Act (SASA 84 of 1996) also prohibit testing as part of the admissions process in public schools. This reflects changes that aim at greater inclusion of diversity in the schooling system (van Eeden, 2018). Additionally, the Employment Equity Act (No. 55 of 1998) also prohibits tests for employment unless the tests are reliable, valid and fair for all employees (van Eeden, 2018). Furthermore, the Health Professions Act (No. 56 of 1974) also aims to protect vulnerable test-takers by restricting the use of psychological tests to registered psychologists (Foxcroft & Davis, 2006). These acts show an acknowledgement of and a guarding against the misinterpretation of test scores and the resulting discrimination based on those test scores.

It is because of the above challenges and the advancements in intelligence testing toward becoming more culturally fair and inclusive that it is necessary to consider the WISC and its use as a measure both internationally, and more specifically, in South Africa.

2.4 WISC AS A CULTURALLY VALID AND RELIABLE INTELLIGENCE TEST

2.4.1 WISC Internationally

The first Wechsler scale, originally intended for a much larger testing sample, was published as the Wechsler-Bellevue Form 1 Intelligence Scale in 1939. It was originally

designed and normed for people in the US aged 10–60 years (Kezer & Arik, 2012). The first Wechsler scale for children was adapted from the Wechsler-Bellevue scale and published in 1949 for children aged five to 15 years of age (Kezer & Arik, 2012). Since then, the WISC has undergone four revisions.

Each revision of the WISC has made a greater attempt to ensure that the test not only remains up to date with theory and research methods but that it also accommodates various diverse groupings of people (Kezer & Arik, 2012; Na & Burns, 2016; Weiss et al., 2015b). This is evidenced by the increase in indexes, additions and cancellation of subtests, changed floors and ceilings on subtests, the replacement of outdated items as well as a decreased emphasis on time limits (Kezer & Arik, 2012; Weiss et al., 2015b). Additionally, each revision took into consideration a greater and increasingly diverse sample in an attempt to re-determine norms to continually develop a more reliable and valid instrument (Kezer & Arik, 2012).

The first 1949 WISC sample selection of 200 children took into consideration individuals from urban and rural areas as well as various parental occupations. These considerations would influence the education obtained and the stimulation received in the home environment and therefore intelligence (Kezer & Arik, 2012). The 1949 WISC provided only three scores: Verbal IQ, Performance IQ and Full Scale IQ. After 25 years the WISC-Revised (WISC-R) was published in 1974 with an age range of six to 16 years. The WISC-III, published in 1991, extended the age range from 6 years and 0 months to 16 years and 11 months. With each revision, there was an increased focus on contemporary and representative norms as attention was paid to the provision of items in subtests that were sensitive to multicultural as well as gender and racial diversities (Kezer & Arik, 2012).

The WISC-IV was the first to make use of a US census-based norm sample of 2 200 children stratified along age, sex, parental education level, race/ethnicity and region (Na & Burns, 2016). Shuttleworth-Edwards et al. (2013a) emphasise it is important to note that even though these samples were more diverse, the majority were white and the minority non-white, as the US demographic was majority white.

In its current form, the WISC-V, which was published in 2014, provides a thorough diagnostic profile of an individual's (age 6 years and 0 months to 16 years and 11

months) cognitive strengths and weaknesses (Cormier et al., 2016). Weiss et al. (2015b) describe the WISC-V as a comprehensive, versatile, clinically rich and child-focused intelligence test. Weiss et al. (2015b) further explain that it is based on well-researched and well-articulated theories that originate in cognitive neuroscience and neuropsychological processes. Reynolds and Keith (2017) further posit that the WISC-V has incorporated current intelligence theories without explicitly aligning itself to one. However, it seems to be closely aligned with the Cattell-Horn-Carroll (CHC) theory which classifies cognitive abilities into three strata to include specific, broad and general abilities (Caemmerer et al., 2020; Kezer & Arik, 2012).

Na and Burns (2016) state the five-fold purpose of the latest revision of the WISC-V. Revisions to the WISC-V were done to i) update the theoretical foundations of the test, ii) increase test appropriateness, iii) increase user-friendliness, iv) improve psychometric properties and v) enhance the instrument's clinical utility. Particular attention was paid to cultural bias as cross-cultural research was involved during the development of test items and potentially problematic test items were identified and removed. Examples of alteration include the removal of words such as "advantage" from the Comprehension subtest so that it would be easier for younger children (Na & Burns, 2016).

The WISC-V measures five domains using five primary indexes, namely Verbal Comprehension Index (VCI), Visual-Spatial Index (VSI), Fluid Reasoning Index (FRI), Working Memory Index (WMI) and Processing Speed Index (PSI) (Wechsler, 2014a; Weiss et al., 2015b). The Full Scale IQ, which provides a measurement for global descriptions of a person's cognitive abilities is measured through various subtests, each relating to the relevant index (Weiss et al., 2015b). Subtests are to be administered and completed in a specific order unless there is a behavioural, situational or clinical reason not to do so (Cormier et al., 2016).

Roberts (2017) highlights that a recent advantage of the test is greater flexibility for the test administrator as they can decide to administer additional subtests, beyond the primary 10, if more information on a domain's functioning is required. The raw score obtained from adding all the index results does not allow for any comparison to be

made with same-age peers. Thus, raw scores are to be converted into standard and scaled scores to allow for comparison (Cormier et al., 2016).

Even though the Wechsler scales have evolved substantially, the model remains grounded in Dr Wechsler's foundational definition of intelligence as "the aggregate or global capacity of the individual to act purposefully, to think rationally and to deal effectively with his (or her) environment" (Weiss et al., 2015b, p. 3). Thus, the WISC provides critical information about a person's overall cognitive capacity to successfully interact with their environment (Weiss et al., 2015b).

The concepts, procedures and methods characteristic of the Wechsler scales have guided much of the intelligence test development and research in the field for many years (Niileksela & Reynolds, 2019). Kezer and Arik (2012), as well as Weiss et al. (2015b), agree that the Wechsler scales have become one of the most widely used measures of intelligence in the world.

The various WISCs have been adopted, adapted, translated and standardised in many countries around the world such as Spain, Canada and the UK, indicating their usability and perceived applicability in various countries (Canivez et al., 2019; Cormier et al., 2016; Weiss et al., 2015b). Weiss et al. (2015b) posit that expert panels predict that certain items in the test will be biased as some groups will have less direct experience with the subject of those items due to the test being primarily designed in a Western context.

Thus, any adaptation of the test may require replacements, i.e. when an item makes a specific reference to American culture, this item may need to be adjusted to remain relevant (Cormier et al., 2016). Research into item bias is referred to as differential item functioning as items perform differently across groups (Weiss et al., 2015b) Scheiber (2016) indicates that despite debate in the literature about the fairness of the scales, studies have found little to no gender or ethnic group bias. Scheiber (2016) further explains that it is important to note that differences in scores that do occur may be due to a variety of reasons such as those related to the home environment and not exclusively to lower intellectual functioning.

The WISC, as an international intelligence test, has attempted to become increasingly inclusive in its development. However, international samples will not be the same as a sample group in the South African sample and thus specific attention needs to be paid to the extent to which the test is appropriate for use with South African children.

2.4.2 WISC in South Africa

Shuttleworth-Edwards (2012) argues that intelligence test adoption in non-Western settings may result in questionable validity and reliability of the test. Furthermore, specifically in the South African context, non-white groups are seen as non-'standard' groups. This implies that these groups and the scores they achieve cannot be compared accurately to a predetermined, Western norm sample. Shuttleworth-Edwards (2012) further states that underachievement by up to 30 points in Verbal Performance (VP) as well as the Full Scale IQ scores by those who come from lesser privileged backgrounds is a phenomenon that should be addressed. Sunderaraman et al. (2016) agree that intelligence testing is a largely Westernised activity that should not merely be adopted and adapted for use in non-Western settings due to the potential of it being biased, unfair and discriminatory in these contexts.

However, Sunderaraman et al. (2016), while recognising the effects culture, race, language and education have on intelligence scores, hold an opposing view to that of Shuttleworth-Edwards. The authors state that the WISC does not view any population as homogenous because heterogeneity is foregrounded in its development, through census-matched samples that take factors such as race, gender and language into consideration. Population-based norm samples are important as they reflect the broader context in which South African children need to function (Sunderaraman et al., 2016). Additionally, the use of census-based samples attempts to bridge the gap between race and socio economics as well as culture and potential biases (Na & Burns, 2016). Nevertheless, Shuttleworth-Edwards et al. (2013a) highlight that unless the census data used is that of the South African population, the sample will still not be representative of the South African population.

Furthermore, Shuttleworth-Edwards et al. (2013a) assert that cross-cultural research with respect to any of the WISC tests is sparse. In the South African context, cross-cultural research of the WISC was last conducted in 1994 by Zindi using the WISC-R.

To date, at the time of publishing in 2013, there had been no attempts at standardisation of a South African sample by any of the WISC revisions (Shuttleworth-Edwards et al., 2013a). Cross-cultural research on intelligence testing has been limited by the diversity in race, culture and educational experiences that exist within the South African context.

In the South African context, the W-BIS was adapted and normed for White Afrikaans- and English-speaking South Africans and renamed the South African Wechsler Adult Intelligence Scale (SAWAIS) in 1969 (Shuttleworth-Edwards et al., 2013b). The SAWAIS was used across all race groups for a long period but with the demise of Apartheid, increased criticism and the increased regulation of intelligence testing, the most recent WAIS, at the time WAIS-III, was normed to a South African sample (1997–1998). Currently, even with the more recent WAIS-IV, the WAIS-III continues to hold crucial relevance as it is the only cross-cultural research to have taken place recently on a Wechsler scale and thus provides useful normative information (Shuttleworth-Edwards, 2012).

Shuttleworth-Edwards et al. (2013a) explain that the standardisation of the WAIS-III considered 900 individuals along four race groups namely, Black, Indian, Coloured and White. The standardisation happened for the English administration of the test and so the sample selected was made up of individuals who spoke English at home. Additionally, minor changes were made to the test to make it more culturally relevant such as replacing ‘dollar’ with ‘rand’ (Weiss et al., 2015a).

It was found that the outcomes of the scores of the sample existed on a continuum and were considered to reflect differing educational quality, a factor that had not been considered in sample selection (Shuttleworth-Edwards et al., 2013a). This standardisation was criticised for being too lenient to White South Africans while being too stringent to Black South Africans. Accordingly, it is apparent that the use of the Wechsler scales cannot merely be administered to various race groups as race itself may not contribute to varying scores but rather the outcomes of education and socio-economic status associated with a particular race (Mpu & Adu, 2021; Shuttleworth-Edwards et al., 2013a). Therefore, educational quality and levels need to be factors

considered in sample selection due to the diversity of quality in the South African context (Shuttleworth-Edwards et al., 2013a).

Further research conducted by Shuttleworth-Edwards in 1998–1999 included English fluency as a parameter for standardisation along with educational quality. It was found that Black South Africans who had advantaged education obtained scores comparable to US samples (Shuttleworth-Edwards et al., 2013a). Further research is required as at the time of research, it was difficult to find Black individuals with more than four years of consecutive privileged education due to the recent end of Apartheid.

Sunderaraman et al. (2016) stress that in South Africa, the typical performance of census-matched normative samples should reflect the scores of majority Black, African first language speakers. If these scores were to be compared with White, well-educated, English first language normative samples, they would typically be lower (Sunderaraman et al., 2016). This is because it cannot be assumed that the dominant culture in any country matches that of another.

The alignment of the WISC-V with the CHC theory allows for the inclusion of and increased recognition of both fluid and crystallised intelligence (Caemmerer et al., 2020). Fluid intelligence focuses on people's ability to think rapidly and with flexibility so as to understand, analyse and interpret stimuli in the immediate environment (Caemmerer et al., 2020; Sternberg, 2012). Crystallised intelligence relates to general or acquired knowledge which requires familiarity with prominent culture through qualities such as vocabulary (Caemmerer et al., 2020). The inclusion of both fluid and crystallised intelligence allows for individuals to interpret test items in ways that will best reflect their unique cognitive abilities (Sternberg, 2012; Weiten, 2016). The increased focus on the Fluid-Crystallised Dichotomy, or inclusion of both intelligences, has also played a major role in increasing the WISC's cultural appropriateness in the South African context as it allows for individual interpretations as well as acknowledges the influence of salient culture (Weiss et al., 2015b).

Bearing in mind the above challenges to intelligence testing as well as the various attempts at greater cultural sensitivity and inclusivity, a conceptual framework centred around these concepts will be discussed next.

2.5 CONCEPTUAL FRAMEWORK

This research study made use of a conceptual framework. Due to the diversity discussed in the above literature review and its accompanying challenges to the utility and applicability of the WISC in the South African context, the conceptual framework of the study was informed by the psychometric concepts that underpin intelligence testing that guided the academic argument of the current research. Due to the diversity of culture and the resulting differences in experience, education, exposure and socio-economic status, the concepts included in this framework focus on validity and fairness, specifically cultural fairness. The concepts of reliability and consistency were also included in the framework to bolster the argument of the current research by ensuring error-free research that would provide data that would remain relevant and applicable over time.

Validity refers to the extent to which an instrument tests what it sets out to test and that specific, predetermined theories allow for scores to be interpreted in a specific way (Pietersen & Maree, 2016). Validity can be viewed as one of the most important constructs in psychometric testing and is thus the desired outcome not only for intelligence testing but for research in general (Price, 2017). In the process of testing, validity includes various aspects such as the response process of the measure, the internal structure of the measure, the relations with other variables and the consequences of testing (Price, 2017).

The construct of validity was thus relevant to the study as it attempted to investigate the educational psychologists' views on the utility of the WISC; therefore, it was necessary to allow for the consideration of the test, its process and the consequences of administering the test to the diverse South African population. The discussion of validity, as related to this study, necessitated a focused discussion of cultural fairness as an individual's culture carries great significance in their development and interpretation of intelligence (Sunderaraman et al., 2016).

Cultural fairness entails the removal of bias and requires that any items on a test which have specific connections to a certain language or culture should not be included as understanding, otherwise the achievement of the respondents will be affected (Coaly, 2010). Additionally, cultural fairness further necessitates unbiased interpretation of

scores and an awareness of the test-taker's background, culture and experience so as to understand variance in the scores obtained (Coulacoglou & Saklofske, 2017). Fairness implies that all people be considered equal regardless of gender, age, culture or language (Coaly, 2010). Additionally, for a measure to be fair, there should not be variance in the results obtained by these different groups (Coulacoglou & Saklofske, 2017).

As expressed by Laher (2019), there is limited availability of culturally relevant tests in the South African context, and it is for this reason that cultural fairness was a particularly important consideration for the study at hand. This study sought to explore the views of three educational psychologists regarding the relevance of the WISC for their clients. Relevance would imply that the measure is accommodating of cultural interpretation and variations in test scores.

For cultural fairness to be determined, cultural awareness is of paramount importance to both the test administrator as well as the researcher of the study. Cultural awareness allows for greater sensitivity to the needs of all members of society, those that are disempowered and disenfranchised as well as those who are not, to be able to identify influencing factors that have the potential to affect test scores (Dana, 2007; Lozano-Ruiz et al., 2021).

Reliability suggests that if an instrument were to be used at a different time or with different respondents it would yield the same results. Reliability refers to the extent to which a test is repeatable, consistent and free of errors of measurement (Pietersen & Maree, 2016; Price, 2017). Reliability and consistency can be viewed as synonymous as reliability can only be established if there is consistency in the scores over time and in different contexts (Price, 2017).

The concept of consistency was relevant to this research study as the scores obtained by one group of children completing the WISC, if it were culturally fair and valid, should be similar to the scores of children from another sample. Similar scores across differing sample groups would indicate reliability (Price, 2017). For the purposes of this research, consistency in scores between different cultural, linguistical and racial groupings would allow for an argument for the relevance of the WISC for use in South Africa. Conversely, should there not be consistency in the scores it would allow for the

argument to be made that the test lacks relevance for the diverse population of South Africa.

2.6 CONCLUSION

It is evident that in the South African context, there are several influencing factors on the development of intelligence which therefore hold the potential to affect intelligence testing. Factors such as cultural, linguistics and racial diversity as well as diversity in terms of experience and socio-economic status all influence each other and pose various challenges to the administration of intelligence tests. While some advancements have been made in the field of intelligence testing, through census-based samples and cross-cultural research, some scholars still maintain that not enough is being done to accommodate the heterogeneity of South African society. This necessitates the discussion of the validity of the WISC in terms of its cultural fairness as well as its reliability for use in the South African context. This research would not only need to take into consideration factors of diversity but also consider how the use of an international test could still potentially yield valuable insights about intelligence in South African children.

CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

3.1. INTRODUCTION

This chapter will discuss the underlying research principles of the research study. This discussion will include a description of and justification for the meta-theoretical paradigm as well as the methodological paradigm that was selected to guide this study. A detailed description of the research methodology will be provided through the discussion of the research design and the procedures used to generate and document the data collected in the study. An explanation of the approach to data analysis and interpretation is provided. This chapter concludes with a discussion of the trustworthiness of the study as well as the ethical considerations adhered to throughout the research process and how these were addressed.

3.2 UNDERLYING PARADIGMS AND RESEARCH APPROACH

The meta-theoretical and methodological paradigms of the study are discussed in this section. A paradigm is defined as the assumptions held about the fundamental aspects of reality which guide how one views the world (Nieuwenhuis, 2016a). It furthermore provides an outline of the values that guide the collection and analysis of data in a research study (Ryan, 2018).

3.2.1 Meta-theoretical Paradigm

For this study, an interpretivist meta-theoretical paradigm was used. Interpretivism is based on an idealist ontology which posits that the world exists in different ways for different people (Ryan, 2018). This implies that reality can only be understood through the study of these diverse socially constructed realities of individuals (Pulla & Carter, 2018; Ryan, 2018).

Interpretivism thus emphasises the individual's ability to construct meaning and interpret the world around them in a unique way (Ryan, 2018). Interpretivism further posits that truth and knowledge are not only subjective but are also situated within specific social or historical contexts based on individuals' experiences and interpretations thereof (Alharahsheh & Pius, 2020; Ryan, 2018). Consequently,

interpretivism acknowledges the influences of culture, human interaction over time and other historical processes (Alharahsheh & Pius, 2020). Thus, there is a specific focus on subjective interpretations and perceptions of the socially constructed lived world of the participant (Alharahsheh & Pius, 2020).

The focus of interpretivist research is centred on the natural environment of the participant to allow for deeper understanding (Alharahsheh & Pius, 2020). It is necessary to note that, because reality is socially constructed, the diversity of people that exists within any given environment will result in multiple perspectives of the same phenomenon (Nieuwenhuis, 2016a).

Due to the idealist ontological nature of interpretivism, the epistemological orientation requires the researcher to seek an understanding of social phenomena by interpreting the meaning made by participants, rather than attempting to explain reality objectively (Alharahsheh & Pius, 2020). Therefore, the researcher is not observing phenomena from the outside but is rather part of the investigation of the phenomena being studied by engaging with participants (Alharahsheh & Pius, 2020; Pulla & Carter, 2018). This necessitates open-ended questioning and active listening (Creswell, 2014). The findings generated from interpretivist studies are seldom generalisable (Pulla & Carter, 2018). However, the interpretivist researcher seeks to discover and generate knowledge about the research problem in a unique setting rather than to identify and formulate generalisations (Thanh & Thanh, 2015).

A critique of interpretivism is that the researcher can never be completely separate from the research as their own values and beliefs will influence how data is collected, interpreted and analysed (Ryan, 2018). However, it needs to be considered that qualitative research does not champion objectivity but rather the development of understanding of phenomena through research with individuals who understand the phenomena. While personal bias and experience have the potential to influence research, the research process should be clearly guided by research questions and appropriate methodology (Thanh & Thanh, 2015).

3.2.2 Methodological Paradigm

This study made use of a qualitative methodological paradigm. According to Bryman (2012), qualitative research has some noteworthy features. Firstly, qualitative research focuses on the natural setting in which the phenomenon occurs. Thus, emphasis is placed on linguistic and meaning-based forms of data rather than numerical data (Nieuwenhuis, 2016a). Secondly, the theory is inductively generated from research rather than conclusions drawn from existing theory. Finally, qualitative research holds a constructionist ontological position which infers that interaction between individuals results in social properties.

In qualitative research, information is usually gathered by interacting directly with individuals from a particular environment – one that is relevant to the study (Creswell & Creswell, 2018). Interactions and data collection make use of open-ended forums so that ideas can be shared freely. This approach is advantageous as it allows for a greater understanding of the phenomenon being studied as answers are not limited to a predetermined, standardised scale but rather focus on the interpretations of the participants' lived experiences of a phenomenon (Creswell & Creswell, 2018).

Qualitative research follows an emergent design that allows for the changing of initial data collection plans should alternative strategies provide greater insight (Creswell, 2014). Consequently, researchers are at the heart of meaning-making as they make all the important decisions regarding how, when and where research is done (Nieuwenhuis, 2016a; Pulla & Carter, 2018). Qualitative research also holds many advantages such as rich descriptions of a phenomenon, greater flexibility in research approaches and allows for a more targeted approach as participants are selected according to a predetermined purpose or field of interest (Nieuwenhuis, 2016a).

Qualitative research typically involves sustained and intensive contact with participants which may raise various challenges. These challenges can be mitigated by ensuring that the researcher respects the rights, needs, values and desires of all participants while maintaining a professional relationship (Nieuwenhuis, 2016a). Furthermore, researchers need to identify and state their own biases and how these could influence their interactions as well as their interpretation of the data (Creswell & Creswell, 2018).

Pulla and Carter (2018) pose the critique that the trustworthiness of a qualitative research study can be questioned because interpretation happens from the researcher's standpoint. Thus, triangulation to build justification of themes, using rich descriptions and clarifying bias is essential to maintaining the trustworthiness of a study (Nieuwenhuis, 2016a).

3.2.3 Justification for the Interpretive Paradigm

As stated, interpretive research foregrounds and values subjectivity due to the belief that our social reality is constructed through individual experience and thus requires a multi-perspective investigation of a phenomenon for understanding. Similarly, in this study, the inclusion of educational psychologists who had experience in the field of intelligence testing, more specifically, with the administration and scoring of the WISC, had varying real-life experiences that influenced their views on the value the intelligence measure held for their clients.

The personal views of educational psychologists regarding the value they believed the WISC held for their clients were informed by the first-hand experiences they had with the diverse population of learners in their practices. These views were influenced by how accessible, appropriate and relevant the test was for all their clients.

An interpretivist approach was adopted to gain an in-depth understanding of the value the WISC held by including and accepting varying realities. This approach allowed for the use of a qualitative methodological approach which permitted direct engagement with participants through semi-structured interviews and active listening to responses that were freely shared by the participants. This allowed for multiple perspectives to be heard which resulted in meaningful and rich data.

Additionally, these approaches highlighted the importance of monitoring personal bias and influence and thus, throughout the study, awareness of the researcher's experiences and biases was maintained and accounted for through continual reflection in the field notes.

3.3 RESEARCH DESIGN

This research study made use of an exploratory case study research design. Yin (2018) describes a case study as a method of investigating a phenomenon, or case,

within its real-world context, allowing for an in-depth analysis. This analysis results in in-depth understanding, a hallmark trait of a good qualitative case study (Creswell & Poth, 2018). This is done through the collection and integration of various forms of qualitative data such as interviews, observations and audio-visual materials.

Creswell and Creswell (2018) further explain that the 'case' can be an event, process, activity or social phenomenon that is bounded by time and involves one or more individuals. Key to a case study research design is the identification of boundaries for the case selection to ensure relevant data is collected to understand the phenomenon being researched (Creswell & Poth, 2018).

Yin (2018) further explains that an exploratory design seeks to answer 'what' questions. This is done through engagement with participants within a specific setting to provide a holistic investigation into a phenomenon (Putney, 2012). Thus, an exploratory case study design was of value for this study as it set out to explore the experiences of educational psychologists using the WISC. Furthermore, the study sought to explore what their views were on its use and value for their clients.

Additionally, an exploratory case study design is advantageous and well suited to an interpretivist paradigm in that it allows for the identification and discussion of differing perspectives on a particular problem, event or process, in this case, the value of the WISC (Putney, 2012). Thus, case study design allows for a deeper, richer understanding of a phenomenon which affords opportunities to propose further research into a topic (Putney, 2012). This was beneficial for the study because limited research has been done on the applicability and usability of the most recent revisions of the WISC in South Africa.

Another advantage is that the researcher gets to work closely with participants allowing participants to share their experiences freely (Nieuwenhuis, 2016b). However, due to the extensive interactional nature of a case study design, researchers are required to protect participants and develop trust all while promoting the integrity of the research and guarding against misconduct (Creswell & Creswell, 2018)

A challenge of a case study design is that findings are not generalisable due to the smaller sample size and specific research context (Nieuwenhuis, 2016b). However,

Yin (2018) states that the depth of data collected in a case study compensates for the lack of generalisability. This study was focused on the experiences of a particular group and provides an in-depth understanding of three educational psychologists' views on the value of the WISC for their clients; thus, generalisability was not essential.

3.4 BINDING THE CASE

Njie and Asimiran (2014) posit that the binding of a case is important in the establishment of parameters to the case and enables a focused way of bringing specific aspects of an issue to light. It also prevents the researcher from attempting to concentrate on too much or analysing too large a volume of information. Nieuwenhuis (2016b) states that a case can be bound in many ways such as a) time and activity, b) definition and context and c) time and place. This case study was bound in terms of the participants that were selected based on activity and context. For this study, the activity required participants who were psychologists that had experience with intelligence testing. The context specified that these psychologists work in the diverse South African context to provide insight into the value the WISC holds for South African children.

Neuman (2014) says that a qualitative sample is selected because it acts as a sample of the social world and thus can give insight into key dimensions of a particular phenomenon. For this reason, this study made use of purposive selection, a form of non-probability sampling, because of its targeted focus. Campbell et al. (2020) state that purposive sampling enhances the understanding of a particular group's experiences. It is due to this group's unique experience with the phenomenon that understanding is deepened. Purposive sampling is well-suited to an exploratory case study design as it allows for the judgement of the researcher in selecting key participants that will allow for answering the research questions of the study (Scheiber, 2016); thus, participants are selected in a non-random manner according to certain criteria to allow for the provision of valuable data (Creswell, 2014).

This research study aimed to answer the question: "What are the views of three educational psychologists from Gauteng regarding the value of the WISC for their clients?" Sample selection for this study was guided by this question and required participants to meet certain criteria.

This study made use of a sample of three participants who were willing to voluntarily participate. In sample selection, a careful note was taken of the demographics of the participants and their clients. The selection of three participants from different demographic groups was done so that there would be a high chance of varying perspectives and experiences, thus generating valuable insight into the value of the WISC for children. Table 3.1 indicates the demographic information of the participants.

Table 3.1: Demographic information of participants

	Gender	Race & language	Age	Years of registration	Demographics of clients[1]
Participant 1	Male	African Tsonga	32	2 years	1. University students from various linguistic, socio-economic statuses and cultural backgrounds. 2. African children from Pretoria North townships and township schools, usually referred by school or social workers.
Participant 2	Female	White English	57	12 years	Primarily in private practice in the Northern suburbs of Johannesburg. Clients come from a variety of schools, but most clients come from more affluent homes. Clients from these schools represent the diversity of demographics within the schools. Pro bono work is done in township areas in which the African client demographic is much less affluent, and resources are limited.
Participant 3	Female	Indian English	31	1 year (in the second year) (registered counsellor of 7 years prior)	Previous experience with school children in Sandton in which the school client demographic was representative of the school, including all racial groups as well as children of foreigners. Moved to private practice in Randburg which is largely represented by affluent and well-resourced schools and clients.

[1] Demographic information was at no point assumed but recorded as participants reported (see interview transcription Appendix D)

The three educational psychologists of this particular study were selected based on the following criteria:

- Participants must be psychologists working in the South African context.
- Participants needed to be registered as psychologists for a minimum of one year.
- Participants needed to have experience using the WISC.

A disadvantage of using purposive selection is that it is difficult to draw conclusions about an entire population based on the findings of a small sample (Pietersen & Maree, 2016). This challenge was addressed by ensuring that deep, rich descriptions of the phenomenon were gathered and used. Furthermore, the focus of this qualitative study was not to make generalisable findings but rather qualitative data of individual participants regarding the value of the WISC. Additionally, there was the challenge of bias, by both participants and researcher. This limitation was addressed by monitoring potential biases that arose during the interviewing process as well as observations which were noted in the field notes.

3.5 DATA GENERATION

Njie and Asimiran (2014) posit that a case study is an embodiment of detail and thus data generation should focus on using techniques that will lead to participants providing the richest and most in-depth information regarding a case. This research study made use of individual semi-structured interviews as well as field notes to allow for rich data collection.

3.5.1 Individual Semi-structured Interviews

According to Nieuwenhuis (2016b), an interview is a two-way conversation in which specific questions are asked by the researcher to collect appropriate data and to learn about the beliefs, ideas and views of the participant regarding a phenomenon. A key characteristic of an interview is that it creates a space for reciprocity as well as reflexivity, both essential for the research process as they create the backdrop against which data analysis and interpretation happen (Galletta & Cross, 2013). Nieuwenhuis (2016b) explains that the main aim of an interview is to obtain rich descriptive data which can only be done through the reciprocal interactions and reflexive adjustments

that an interview allows. This study made use of semi-structured interviews which were guided by open-ended questions that were predetermined but which allowed for probing and clarification of participants' answers (Nieuwenhuis, 2016b). Thus, the question of educational psychologists' experiences was addressed in a way that allowed for varying answers as the line of questioning allowed for targeted research but also the inclusion and exploration of individual experiences.

For this study, the interviews were done with three educational psychologists who met the criteria stated above. At the onset of the interview, rapport was built with the participants by engaging in small talk. After this, a brief synopsis of the research was again presented. Ethical issues of confidentiality, anonymity and voluntary participation were established. Furthermore, an opportunity was again given to ask any questions.

The interviews took a total of 90 minutes each to complete and were guided by a semi-structured interview schedule (see Appendix A) that consisted of eight open-ended questions. Semi-structured interviews were used as fewer direct questions allowed for the emergence of unexpected responses, but this also meant that the researcher needed to be able to prompt the interviews in a specific direction and probe participants for clarification (Morgan & Hoffman, 2018). In this study, a provision was made in the interview schedule for probing and clarifying questions to foster the continuation of conversations. Furthermore, responses were carefully listened to and clarified.

Interviews were advantageous in that they allowed for rich data to be collected on participants' experiences of using the WISC. This was because of greater flexibility in answering and the provision made for contradicting beliefs through the use of open-ended questions (Nieuwenhuis, 2016b).

3.5.2 Field Notes

Field notes are defined as written observations of occurrences in the field and are considered critical to a holistic understanding of phenomena (Tenzek, 2017). Field notes allow for the collection of additional data that may not be overtly expected of the research, such as demographic information or the setting of the interview which allow

for rich contextual data to be collected (Phillippi & Lauderdale, 2018). Field notes play a critical role in enabling the researcher to immerse themselves in the environment in which research is occurring as specific attention is paid to the space, people, interactions and even what is not being said (Tenzek, 2017). Bryman (2012) notes that, within fieldnotes, the researcher is able to note personal reflections which allow for reflexive interpretations of the process as well as the identification of any bias or influential opinions or stereotypes. The inclusion of early analytical thoughts in the field notes by the researcher also acts as the starting point for further theoretical elaboration (Tenzek, 2017).

Observation of participants allowed for the identification of nonverbal cues which facilitated continued open discussion and prompting as required. To ensure accurate field notes, they were taken down in shorthand, during and directly after the interviews[2]. Additionally, my reflections were included to help make meaning of the data collected by monitoring my own preconceptions and potential biases.

3.6 DATA DOCUMENTATION

To capture the information gathered in the data collection process, this study made use of interview audio recording, interview transcription and field notes as the data documentation sources.

3.6.1 Audio Data Documentation

Audio recordings of the interview proceedings were made using a voice recorder, with the consent of the participants, to provide a verbatim account of the proceedings. This allowed for active involvement with and observation of participants by the researcher as well as the facilitation of discussions. The credibility, how congruent research and findings are with reality, was enhanced by the audio recordings as they provided a real-time, contextualised account of the proceedings (Nieuwenhuis, 2016b).

[2] See Appendix C for Field Notes (including initial coding for data analysis)

3.6.2 Interview Transcription

The audio recording was transcribed word-for-word[3]. After transcription was completed, it was checked against the audio recording to ensure accuracy. Interview transcripts and audio recordings were scanned and saved in an electronic format. These were kept in a password-protected folder on the researcher's personal computer as well as on a password-protected USB which was given to the researcher's supervisor.

3.6.3 Field Notes

For this research study, field notes acted as both data collection and data documentation sources. As stated above, field notes allow for 'in-the-moment', contextual collection of thoughts, observations and analytical ideas (Phillippi & Lauderdale, 2018). In this form, they are an essential tool for data collection. However, for documentation, several relevant aspects were included in the field notes to allow for their optimal use. As suggested by Phillippi and Lauderdale (2018), these included pre-interview planning notes, dates and setting of data collection, demographic information as well as critical reflection notes.

Before the interviews, field notes included how participant information would be protected and planning for the interviewing process. Field notes are also the most reliable when they are done both during the interview, in shorthand, as well as after in a more comprehensive manner while the interviewing process and occurrences are still fresh in the researcher's mind (Phillippi & Lauderdale, 2018). In this study, field notes were taken in this manner to ensure continual engagement and limited distraction from the interviewing process.

Additionally, demographic details of participants are highlighted as an important aspect to note in field notes. For the purposes of this study, it was not only the demographic information of the participants that were noted but also that of their clients as this provided greater insight into their perspectives on the value of the WISC for children.

[3] See Appendix D for Interview transcription (with initial coding for data analysis)

Field notes are also an essential starting point for critical reflection and as stated above, as a data collection source, the researcher kept notes of any personal biases and feelings that occurred during the interviews. In addition, for documentation, the researcher did a self-evaluation of performance. This was done to allow for the inclusion of suggestions for better practices in the future or possible issues that were not addressed or probed sufficiently. The documentation of the researcher's own biases and reflections added to the transparency of the research. Moreover, credibility was further enhanced through continual reflection and discussions with the research supervisor (Nieuwenhuis, 2016c). Field notes were also scanned and kept in a password-protected electronic format.

3.7 DATA ANALYSIS AND INTERPRETATION

This research study made use of inductive thematic analysis as the data was studied to allow for the emergence of themes rather than analysed with preconceived ideas (Maree, 2016). This form of analysis is based on the idea that there are multiple realities and to best understand these, data must be collected without external influencing biases. Yin (2018) further posits that data sources should not be analysed or reported on independently but rather that an overall understanding is more beneficial. Braun and Clarke (2006) define thematic analysis as a method of identifying, analysing and reporting patterns or themes within data in which the researcher plays an active role. A theme is described as an entity that captures something important in the data in relation to the research question which also represents a patterned or common response (Braun & Clarke, 2006).

Thematic analysis was of value to this study as the purpose was to understand educational psychologists' views as broadly as possible, with the emphasis placed on unique individual experiences. Thematic analysis necessitates the systematic analysis of participant responses and allows for accuracy and intricacy that will enhance the meaning made by participants (Alhojailan, 2012). This bottom-up approach was beneficial as it ensured that findings were specifically linked to the research and allowed for the use of an exploratory case study (Braun & Clarke, 2006).

Braun and Clarke (2006) identify six steps for the process of thematic analysis but also acknowledge that analysis is seldom a once-off, linear process but rather a cyclical,

iterative process. The first step requires the researcher to familiarise themselves with the data by transcribing, then reading through the entire data set and noting down initial ideas. Immersion in the data is required of the researcher and this may require repeated and active reading of the data. Figure 3.1 illustrates initial notes made during familiarisation.

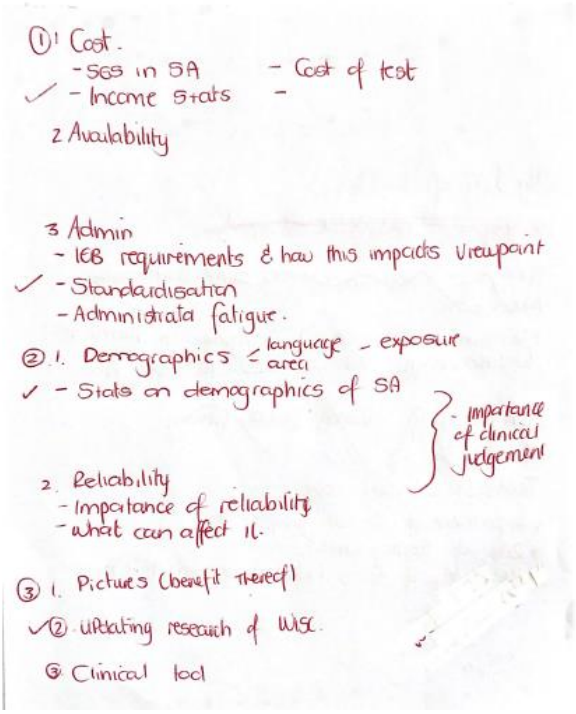

Figure 3.1: Initial familiarisation notes

Initial codes are generated in step two by collating the data into specific codes. Codes are the more basic segments of raw data and centre around a single feature of the data collected (Braun & Clarke, 2006). These codes allow for the organisation of the data into meaningful groups. Figure 3.2. shows the initial codes that were generated after interviews were read through and initial ideas noted. Figure 3.3. demonstrates how these codes were used in the line-by-line analysis of the interview transcription. The codes were then used to search for themes in step three, a broader level analysis. Codes are examined for potential similarity and uniformity to create broader overarching themes (Braun & Clarke, 2006).

Figure 3.2: Initial codes

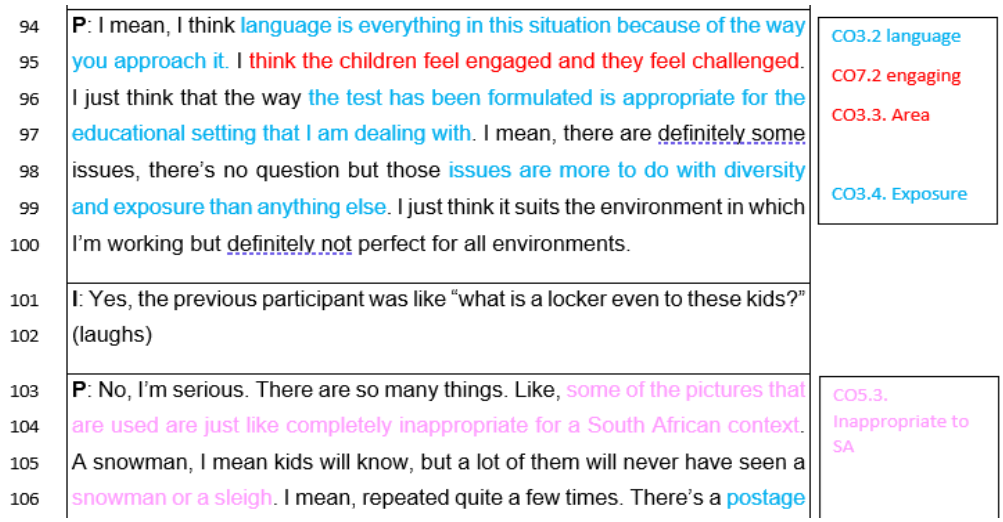

Figure 3.3: Line-by-line analysis and use of codes

Step four requires the researcher to review and refine the themes to make sure that they work in relation to the research question and that sufficient examples can be provided for each theme. Figure 3.4. illustrates the creation of overarching themes. Figure 3.5. illustrates an example of the identification of examples for each sub-theme identified.

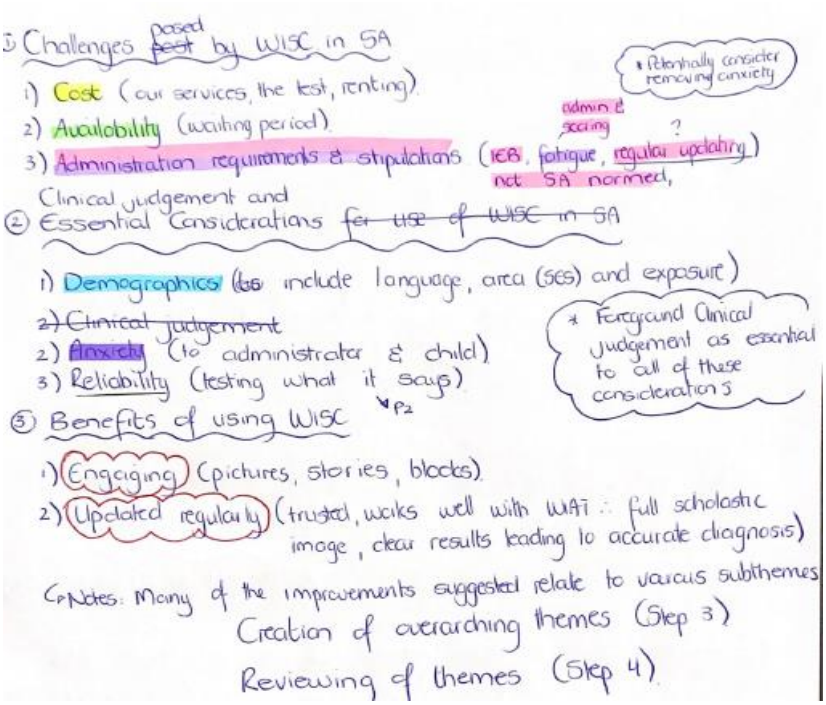

Figure 3.4: Overarching themes

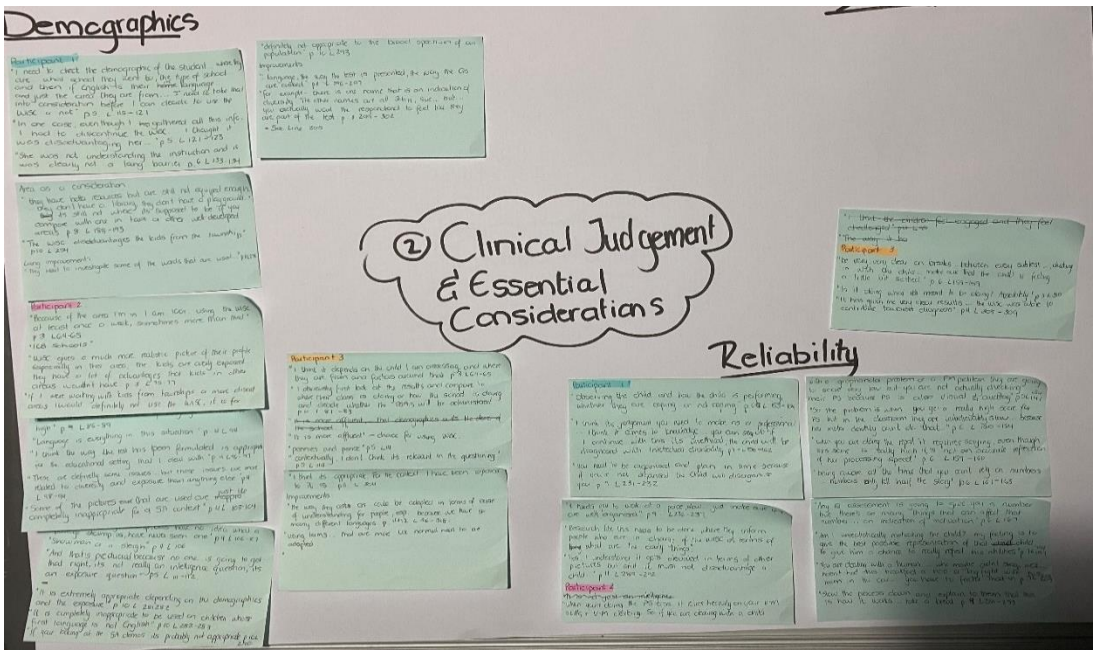

Figure 3.5: Identification of examples for each sub-theme

Step five allows for the refinement of themes as they are defined and named, and their essence made apparent. Figure 3.6. illustrates the refinement of themes in this study. Finally, in step six, a report on the findings is generated by providing compelling examples as well as relating the analysis to the research question and literature (Braun & Clarke, 2006). Figure

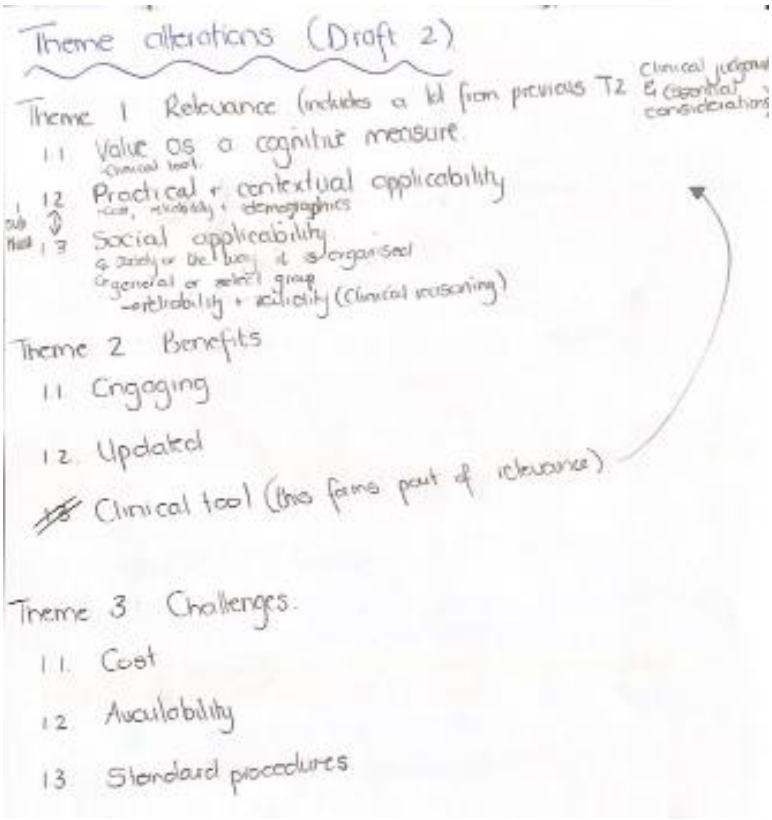

Figure 3.6: Refinement of themes

Inductive thematic analysis was advantageous due to its flexibility and lack of set parameters for completion, thus allowing it to be used alongside any qualitative data collection method (Morgan & Hoffman, 2018). The findings of thematic analysis allow for the topic to be understood widely and are also usually accessible to the general population (Alhojailan, 2012). In the current research study, it was necessary to identify themes from the experiences of educational psychologists on the use of the WISC in a culturally diverse setting which is currently a field of limited research. It also allowed for the highlighting of similarities and differences that existed within the data

set (Braun & Clarke, 2006) which made clear the existing views held by educational psychologists.

Possible challenges that could arise are that themes may overlap especially when the research focus is narrow (Braun & Clarke, 2006). This challenge was mitigated by providing many examples from the data set to allow for the identification of parameters between themes. It has also been found that there may be a mismatch between the research question and the research findings (Braun & Clarke, 2006). This challenge was averted by ensuring that data collection captured data that was consistent with the research questions.

3.8 TRUSTWORTHINESS OF THE STUDY

According to Bryman (2012), trustworthiness reflects how “true” a study is including the information it generates. Qualitative research occurs in particular settings with specific people. Therefore, what is considered “true” by individuals may be different as realities are socially constructed (Lincoln & Guba, 2007). There are mainly four quality criteria that determine the trustworthiness of a qualitative study, these include credibility, transferability, dependability and confirmability. Lincoln and Guba (2007) suggest the fifth criterion of authenticity.

3.8.1 Credibility

The credibility of a study deals with how congruent the findings are with reality (Daniel, 2019; Nieuwenhuis, 2016c). Credibility is established through the use of well-researched and well-established methods and designs (Bryman, 2012). Furthermore, for a study to be credible, the findings must be an accurate representation of the data originally collected from participants (Bryman, 2012; Daniel, 2019).

To enhance the credibility of the current research study, several strategies were employed. Extensive research into the field of intelligence testing and the various developments within the field were investigated and studied before commencing with data collection and generation. Additionally, triangulation or crystallisation was used in that data was collected and documented in various ways to provide a more complex and deeper understanding of the phenomena under study (Nieuwenhuis, 2016c). Triangulation allows for the identification of inconsistencies across participant views.

To elicit honest responses from participants, they were made aware that participation was entirely voluntary, and that withdrawal was allowed at any time without any negative consequences (Bryman, 2012). Furthermore, rapport was established with participants before engaging in the interviews. Moreover, all responses were clarified during the interview proceedings to ensure accurate understanding. Regular debriefing sessions with the researcher's supervisor throughout the research process were also held to monitor potential biases and to ensure the research was on the right course.

3.8.2 Transferability

The generalisability of a qualitative study is challenging as qualitative research is embedded within a context with specific participants (Daniel, 2019; Lincoln & Guba, 2007; Stahl & King, 2020). It is for this reason that transferability is of great importance. Transferability in qualitative research encourages researchers to produce thick descriptions which are extensive accounts of the details given by people in a particular situation at a particular time (Bryman, 2012). These thick descriptions allow others to make judgements about the degree of fit the findings may have to others elsewhere (Daniel, 2019; Lincoln & Guba, 2007; Stahl & King, 2020).

To enhance the transferability of the study, rich and detailed descriptions were given of the phenomenon under study. This was done so that readers would be able to understand and possibly replicate research in similar contexts. Furthermore, purposive sampling with clear inclusion criteria was used to select participants.

3.8.3 Dependability

Dependability is the parallel of reliability in quantitative research, thus whether it will yield similar results over time (Nieuwenhuis, 2016c). Dependability requires that trustworthiness be established through the adoption of an 'auditing' approach by the researcher (Bryman, 2012; Stahl & King, 2020). Thus, a researcher is required to keep a complete record of all the phases of the research process, from problem formation to data analysis, to allow future researchers to replicate the study (Bryman, 2012). Qualitative research design may change, and new aspects incorporated to strengthen the process and it is important to document these alterations and their justification (Nieuwenhuis, 2016c).

The dependability of the study was enhanced by the creation of an audit trail that documented the research process. Field notes which included personal reflections, audio recordings and verbatim transcriptions all allowed for extensive documentation of the process. Additionally, reflective sessions about the research were conducted with the researcher's supervisor to monitor progress as well as the logical progression and coherence of the study.

3.8.4 Confirmability

Confirmability refers to the extent to which the findings of the study are created by the participants and their unique responses rather than by researcher bias or personal motivation (Nieuwenhuis, 2016c; Stahl & King, 2020). However, it is still recognised that complete objectivity is impossible in social research. Researcher bias is reduced through the recognition of personal predispositions (Bryman, 2012). Furthermore, it should be overtly clear that the personal values of the researcher did not influence their theoretical interpretations. The audit trail mentioned above serves as a valuable measure for ensuring confirmability as it allows the researcher to trace the course of the research (Nieuwenhuis, 2016c).

As with dependability, the confirmability of this research study was enhanced through meticulous record keeping of the research process to create an audit trail. Personal reflection in the field notes acted as a means to remain transparent and to monitor researcher bias.

3.8.5 Authenticity

The authenticity of a study deals with the criterion of fairness. This implies that throughout the research process different constructions that emerge will be accepted due to the social nature of qualitative research (Amin et al., 2020; Lincoln & Guba, 2007). The research should expose and investigate the various perspectives and constructions of reality (Bryman, 2012). Essential to this process is that the researcher ensures that all constructions be presented, clarified and honoured (Amin et al., 2020; Lincoln & Guba, 2007). This was done in several ways in the current research. An audio recording was made of the interview proceedings after which they were transcribed verbatim. All responses by participants were checked for understanding by the researcher and all responses were used for the process of data analysis.

3.9 ETHICAL CONSIDERATIONS

This study adhered to the ethical guidelines as stipulated by the University of Pretoria and the HPCSA. The core principles of respect for persons, non-maleficence, beneficence and respect for the human rights of the participants were strictly adhered to (HPCSA, 2016). Furthermore, participants' autonomy to make their own decisions was foregrounded in the exploratory nature of the study. Additionally, the responsibility of truthfulness ensuring confidentiality and tolerance over varying beliefs was taken on by the researcher (HPCSA, 2016).

3.9.1 Permission to Conduct Research, Informed Consent, Voluntary Participation and Deception

Before the research of the current study could commence, a research proposal was submitted to the Ethics Committee of the Faculty of Education at the University of Pretoria which outlined the plans for the research study to obtain ethical clearance.

Contact was first made with possible participants to informally request their participation in the study. In this informal request, they were provided with the research proposal of the study as submitted to the ethics committee. Participants were able to ask any questions they had regarding the research and agree to or turn down the invitation to participate.

Informed consent is required from participants before research can commence and is considered a cornerstone of ethical research practice (Griffin & Bengry-Howel, 2017). This requires that prospective participants be given as much information as needed to be able to make an informed decision about their participation in the study (Bryman, 2012). Once the research was informally presented to potential participants, they were granted the opportunity to ask questions and voluntary participation was requested of those willing to participate. Participants were provided with a detailed consent letter which included consent for audio recordings to be made of their interview proceedings. These methods of information provision attempted to mitigate the potential of deception as all information was given in clear, concise and understandable terms.

3.9.2 Privacy, Confidentiality and Anonymity

The ethical consideration of privacy recognises that although informed consent has been given by a participant, the participant may refuse to answer any question that they feel delves into personal information or information that they are not comfortable sharing (Bryman, 2012). According to Bryman (2012), privacy is inherently linked to the issues of anonymity and confidentiality, all of which need to be respected. Confidentiality implies that private data that could lead to the identification of the participant should not be shared, thus ensuring anonymity (Griffin & Bengry-Howel, 2017).

This research study maintained confidentiality by protecting the identities of participants by making use of pseudonyms/code names for participants. No information that would allow for the identification of a participant was used. All sources of data documentation were stored in a safe place that only the researcher and the supervisor had access to. Additionally, anything electronic was stored in a password-protected folder.

3.9.3 Respect, Integrity and Truthfulness

The principles of respect, integrity and truthfulness were adhered to throughout the study. As early as the first interactions with potential participants, clear and concise information was given regarding the nature of the research as well as what was required of them. Furthermore, during data collection with the participants, open and honest discussions were encouraged. Participants were able to, at all times, ask questions or raise concerns.

3.10 SUMMARY

This chapter reviewed the interpretivist meta-theoretical and qualitative research paradigms underlying the current research study. This chapter also discussed the exploratory case study research design that would make use of individual interviews with three participants. Additionally, detailed descriptions of data collection, documentation and analysis were given as well as their advantages and how potential challenges were addressed. Finally, how quality criteria were met as well as what ethical considerations were considered, was discussed.

CHAPTER 4: FINDINGS OF THE STUDY

4.1 INTRODUCTION

The findings of the study are reported in this chapter. The chapter covers three broad themes and seven sub-themes. Theme 1 relates to how relevant the participants in this study believed the WISC is for the clients they assess. Theme 2 explores the benefits they believed the WISC has while theme three relates to the various challenges they experienced when using the WISC.

Table 4.1 below shows an overview of the themes and sub-themes to be discussed in this chapter.

Table 4.1: Overview of themes and sub-themes

THEMES	SUB-THEMES
Theme 1: Relevance of the WISC	1.1 Value as an intelligence test
	1.2 Practical, contextual and social applicability
Theme 2: Benefits of the WISC	2.1 Engaging nature of the WISC
	2.2 Regular updating
Theme 3: Challenges experienced with the WISC	3.1 Affordability
	3.2 Availability
	3.3 Standard procedures

The following section provides a discussion of the findings of the study that emerged from the thematic data analysis. The section after, section 4.3, will discuss the findings within the context of the literature.

4.2 FINDINGS OF THE STUDY

The discussion of each of the following themes and sub-themes will include a definition and the inclusion criteria for data and excerpts from the data to support the findings.

4.2.1 Theme 1: Relevance of the WISC

The participants in this study were asked various open-ended questions regarding their views on the relevance of the WISC for their clients. For the purpose of this study, relevance refers to the participants' views if the WISC has value as a cognitive assessment measure as well as their views on its practical, contextual and social applicability.

The above working definition was used to identify the sub-themes related to the theme of relevance namely value as an intelligence test and practical, contextual and social applicability.

4.2.1.1 Sub-theme 1.1: Value as an intelligence test

Table 4.2 provides a working definition of value as an intelligence test as well as the inclusion criteria for the sub-theme.

Table 4.2: Working definition and inclusion criteria for sub-theme 1.1

Working definition: Value as a cognitive measure
According to WISC technical and interpretive manual (Wechsler, 2014b), an intelligence test has value when its items adequately measure the domains of intellectual functioning and a broad range of cognitive processes in a manner that is relevant.
Inclusion criteria
Any reference made to the WISC as being of value. Words that guided the inclusion of data were clinical tool, wealth of information and amazing tool.

While discussing the WISC and its relevance for use with clients in their practice, it became evident that the participants felt it held value. They described the WISC as a clinical tool that allowed them to gather and evaluate more information than merely the cognitive functioning of the client. This additional information included aspects such as motivation, emotions and learning style. Additionally, they believed that the WISC was beneficial in practice as it could be used with other assessment media to create more holistic images of the client.

Participants 1 and 2 both shared this sentiment as evidenced by the following statements:

> *It is not just an intelligence test, but it is a clinical tool!... in the process... you get to look at more than intelligence … you're looking at emotional intelligence … style of learning … IQ is obviously the objective of that particular assessment but there's so much other stuff you get out. It gives you such a wealth of information (P2, L117-131)[4].*

> *The WISC is an absolutely amazing tool … there's a lot of benefit to it because it works well with the WIAT. These two tests basically give you a full scholastic view (P3, 265-273)[5] (see also P2, L308-309)[6].*

Although participant 1 believed that the WISC had value as an intelligence test for the clients he assessed, he expressed reservations about the WISC applying to children from townships. This was indicated by the following statement:

> *…it's a difficult question. I don't prefer either (referring to the SSAIS-R versus the WISC). Let me just be honest. The SSAIS is outdated, some of the words,*

---

[4] After every quote, in brackets, the "P" indicates which participant expressed the response, the number following the P correlates with the interview number (1-3). After the comma the letter "L" followed by a number (or number range) indicates the line reference as indicated on the interview transcripts (refer to appendix D).

[5] Data were quoted verbatim with light editing to ensure that the authenticity of the data is not lost but that understanding is ensured.

[6] For brevity, the best samples of data are presented that illustrate the findings that emerged and thereafter additional data is referenced which further support the findings. The participant and line references are presented.

> *like you say are just not relevant. The WISC disadvantaged the kids from the townships. That's why I'm saying, it's a catch-22 this one (P2, L252-255).*

The context from which a client originates, such as a township, seems to affect the participants views if the WISC is relevant. This was reflected in the fieldnotes and discussed with participants that "*in South Africa often race is synonymous with living in certain areas or having certain experiences*" (F1)[7]. Participant 3 indicated that this was not always the case and that she has worked with children from affluent homes who also experienced difficulties with the WISC. Participant 2 agreed with the point that the researcher made which led to a discussion about the importance of the consideration of demographic factors such as language, socio-economic status and its accompanying levels of exposure and education when a decision has to be made about the administration of the WISC:

> *It is extremely appropriate depending on the demographics and exposure, it is completely inappropriate to be used on children whose first language is not English, it is appropriate, there's absolutely no question (P2, L281-283).*

These demographic factors and the role they play in deciding the relevance of the WISC will be elaborated on in sub-theme 1.2 as a factor that influences the practical, contextual and social applicability of the WISC.

4.2.1.2 Sub-theme 1.2: Practical, contextual and social applicability

Table 4.3 provides a working definition of practical, contextual and social applicability as well as the inclusion criteria for the sub-theme.

[7] Fieldnotes reflections that appear in a specific interview are indicated with an 'F' followed by the number of the interview. This is to allow for referral to indicated reflections in the fieldnotes (see Appendix C).

Table 4.3: Working definition and inclusion criteria for sub-theme 1.2

Working definition: Practical, contextual and social applicability
All psychological instruments used in South Africa should be reliable, valid and unbiased for all groups in the country. This implies that the measure should carry practical, contextual and social applicability to make it relevant and to allow for ethical administration (Laher & Cockcroft, 2013).
Inclusion criteria
Any reference made to various contextual factors that contribute to the diversity of the South African context and thus affect the administration of an internationally normed assessment. Words that guide the inclusion of data in this sub-theme are demographics, language, area, socio-economic status and exposure.

The participants agreed that the demographics of their clients played a vital role in their decision to utilise the WISC in their practices. It was stated that careful attention needed to be given to factors such as the type of schooling received, the language of teaching and learning as well as home language which could potentially affect the test-taker and their achievement on the test. The physical location where the client originated from was noted to be a key consideration. In this regard, the school context and language background were identified as important when considering the use of the WISC. This was evident in the following statement:

> *I need to check the demographic of the student … where they are … what school they went to, the type of school … and then if English is their first language and just the area they are from … I need to take that into consideration before I can decide to use the WISC or not (P1, L 115-121) (see also P3, L64-65, P3, L81-83).*

Working mostly with learners from townships, participant 1 explained that, even though there were now private schools in townships, there was still a lack of resources:

> *They have better resources but are still not equipped enough … they don't have a library; they don't have a playground. It is still not where it is supposed to be if you compare with one [a school] in town or other well-developed areas (P1, L188-193).*

After interviewing participant 1 who expressed the view that the WISC disadvantaged children from the townships the researcher reflected on this in fieldnotes as follows: "*because of area = WISC more suited to certain demographics*?" (F2). This reflection prompted the researcher to gauge the views of the other two participants on this. Participant 2 echoed the sentiment that it may disadvantage certain people but also noted that the area where her practice was located, much like that of participant 3, allowed them to use the WISC. This was evidenced by the following statements:

> *If I was working with kids from the townships or more disadvantaged areas, I would definitely not use the WISC, it is far too advanced and the language much too high (P2, L86-89) (see also P2, L75-77, P3, L304, P2, L96-97).*

> *Because of the area I'm in, I am 100% using the WISC (P2, L64) (see also P3, L101).*

A key demographic consideration for all the participants was language. Having 11 official languages in South Africa plays an important role in the administration and scoring of an English language normed intelligence test as it may affect the scores obtained. Participant 2 indicated:

> *Language is everything in this situation (P2, L94).*

> *It [the WISC] is extremely inappropriate to be used on children whose first language is not English (P2, L282-283).*

All three participants indicated that language needed to be carefully considered and potentially improved on in the WISC to make it more relevant to all in the South African context. Specific item examples were also given that may need reconsidering.

> *They need to investigate some of the words that are used (P1, L276).*

> *I think the biggest thing is obviously language, the way the test is presented, the way questions are asked... for example, there is one name that is an indication of diversity. The other names are all John, Sue … but … you actually want the respondents to feel like they are part of the test, that they don't feel something does not apply to them (P2, L296-303) (see also P3, L316-318).*

Moreover, participant 2 noted that exposure was a key consideration when using the WISC as, once again, a lack of exposure has the potential to affect understanding and thus the scores obtained. The use of certain terminology was also linked to exposure. This was indicated by the following statements:

> *It is appropriate depending on demographics and exposure (P2, L281-282).*

> *There's a postage stamp, kids have no idea what a postage stamp is (P2, L106-107) … snowman or a sleigh (P2, L106) … and that's prejudicial because no one is going to get it right, it's not really an intelligence question, it's an exposure question (P2, L111-112) (see also P3, L20).*

Furthermore, most participants noted that there were areas of potential improvement for the use of the pictures in the WISC. These improvements were mostly related to ensuring relevance and applicability concerning the aspect of exposure and diversity discussed above. The following ideas were indicated:

> *…they are not exposed to some of these pictures and then need to guess what's missing (P1, 278-280). …Something like a locker … they've never seen a locker (P1, L283-284) … it should be things kids are exposed to daily (P1, L288).*

> *Pictures are not diverse enough, it is not reflective of our population (P2, L298).*

It was evident that the participants were of the view that many contextual factors characteristic of the South African population had the potential to influence the extent to which the WISC was relevant to various individuals. In the fieldnotes, the researcher noted the following reflection: "*many factors need to be considered before the use of the WISC which raises the question of relevance for all*" (F1). In all the interviews the

participants noted, often naturally and without guidance, that clinical reasoning was an essential skill in the administration of the WISC to ensure that the results obtained were valid and not influenced by factors such as those discussed above. This was evidenced by the following quote:

> *I think it's a judgement you need to make as a professional … I think it comes to knowledge… you can see, 'Oh, if I continue with this, it's unethical, the child will be diagnosed with intellectual disability (P1, L158-162).*

When asked in what ways the WISC could be made more appropriate to the South African context, the participants indicated that more research needed to be done to find effective ways of ensuring it was appropriate for what South African children were exposed to. This was evidenced by the following statement:

> *Research like this needs to be done where they inform people who are in charge of the WISC in terms of what are the daily things. … Yes, I understand it gets elevated in terms of other items, but it must not disadvantage a child (P1, L289-292).*

Recognition of the regular updating, as discussed in the next section, allowed participants to feel that the various factors needed to be considered before the administration could be addressed in future research and revisions. The primary hope was that the South African population would be considered and possibly even included in normed samples to make it more relevant. This was indicated in participant 1's hope for future updates:

> *Like with the WAIS is, that they've standardised it for South Africans. So, for some of them, the words are South African, some of the questions are South African and the norms. My wish is for the WISC to be done like that also (P1, L257-2590).*

In addition to exploring the advantages of the WISC, it also became apparent through the discussion about the applicability of the test, that the WISC held many benefits. The participants were also asked directly about the positive attributes of the WISC. These will be discussed in Theme 2.

4.2.2 Theme 2: Benefits of the WISC

This theme captures the participants' views regarding the benefits of the WISC. Benefits of the WISC, for this study, are defined as the positive attributes of the WISC that allow for its beneficial use.

The following two sub-themes for Theme 2 were identified from the data. Each sub-theme discusses benefits as identified by the participants, namely the engaging nature of the test and regular updating.

4.2.2.1 Sub-theme 2.1: Engaging nature of the WISC

Table 4.4 provides a working definition of engagement as well as the inclusion criteria used for sub-theme 2.1.

Table 4.4: Working definition and inclusion criteria for sub-theme 2.1

Working definition: Engaging nature of the WISC
The WISC technical and interpretive manual (Wechsler, 2014b) defines the WISC as an engaging measure because it is updated and attractive for children. This allows children to focus their efforts on the task.
Inclusion criteria
Any reference made to benefits relating to elements of the WISC that make it engaging. Words that guided the inclusion of data in this sub-theme were engage (and all forms of the word e.g. engaging), interested and comforting.

The participants were asked to consider the advantages of the WISC. In relation to some of the other intelligence tests available for administration, the participants noted that the WISC had various elements, such as pictures and blocks, which allowed for greater engagement by the test-taker which they deemed beneficial to its use. It was noted that these elements allowed the test-taker to feel engaged and interested and even provided a sense of comfort for some. This was illustrated by the following statements:

I think children feel engaged and they feel challenged (P2, L95).

It is not as intimidating as the SSAIS, there's pictures, it's engaging. So, for other kids, they thrive on that (P1, L218-219).

I feel like the WISC, if used correctly, is actually quite comforting because it provides the client with an object or picture … or something to bring the focus point to the here and now (P3, L142-144).

Most kids enjoy the blocks … they look forward to those blocks. It's a break from … traditional school things (P3, L148-149).

Regular updates of the WISC were noted by the participants as an additional benefit of the test. This benefit will be discussed in sub-theme 2.2.

4.2.2.2 Sub-theme 2.2: Regular updating

Table 4.5 provides a working definition of regular updating as well as the inclusion criteria used for sub-theme 2.2.

Table 4.5: Working definition and inclusion criteria for sub-theme 2.2

Working definition: Regular updating
The updating of the WISC specifically refers to adjustments and renewals made to various aspects of the measure to improve the assessment, changes in time emphasis, replacement of outdated items and inclusion of more diverse samples (Kezer & Arik, 2012).
Inclusion criteria
Any reference made to benefits relating to the updating of the WISC. Words that guided the inclusion of data in this sub-theme were recent, updated, advantages and trust.

The participants discussed several benefits relating to the regular updating and continual research conducted for the improvement of the WISC. It was noted that the language used was more recent and that test-takers were likely to be more familiar with it than some other existing measures. Furthermore, other measures such as the

SSAIS-R were said to be outdated, thus making the updated WISC a more reliable and trusted tool This was indicated by the following:

> *In terms of the language, it is recent. It's updated because they are exposed to TV, they are exposed to some of the language now (P1, L221-223).*

> *People trust it, more than they trust the SSAIS because the SSAIS is sorely outdated* (P3, 268-269).

The participants were asked to consider both the advantages and disadvantages of the WISC in the South African context. Disadvantages were primarily discussed as challenges that the participants faced. These challenges will be discussed in Theme 3.

4.2.3 Theme 3: Challenges experienced with the WISC

Challenges, for this study, are defined as difficulties the participants experienced that they felt hindered their access and administer the WISC in their settings.

The following three sub-themes discussed are challenges as identified by participants, namely, affordability of the test, availability of the test and standard procedures.

4.2.3.1 Sub-theme 3.1: Affordability

Table 4.6 provides a working definition of the affordability of the measure as well as the inclusion criteria for the sub-theme.

Table 4.6: Working definition and inclusion criteria for sub-theme 3.1

Working definition: Affordability
Laher and Cockcroft (2013) define the challenge of affordability as having a limited or non-existent budget to purchase or upgrade test materials.
Inclusion criteria
Any reference made to the cost of the measure. These references included the cost of purchasing the measure, cost of renting the measure and the cost of services provided due to the cost of the measure. Words that guided the inclusion of data in this sub-theme were cost, expensive and unaffordable.

The participants, particularly those who were in the early years of establishing their practices, indicated that the cost of purchasing the WISC was exceptionally high and they could not yet afford it. However, they indicated that this was also a challenge for many other established educational psychologists who were finding it difficult to purchase the measure due to its cost. The following excerpts described this challenge:

> *We can't afford it as psychologists. I think we have about nine ed psychs, and it's African ed psychs, not even one has the WISC or WAIS, so we can't afford the WISC (P1, L314-316) (see also P3, L160-161, 165).*

Additionally, it was stated that larger institutions such as schools do not have the budget to purchase the WISC.

> *Just a bit of context, (school name) being such an affluent school …, they didn't buy it, they were like, no ways, we are not going to buy that assessment. It's too expensive. So, if it is a tool that is a necessity for a school like a public school. How must that be done (P3, L175-179)?*

A factor that needed consideration in the affordability of the WISC was that the test was updated regularly and the ethical requirement for psychologists to use the latest version of the test meant that they had to incur these high costs regularly. Participant 1 stated the following in this regard:

Keep on updating while you're still busy using the other one (P1, L330).

The researcher reflected on this as follows: "*The cost of the assessment surely has a negative impact on the clients and would this not mean that the demand for these assessments cannot be met due to the high cost to both practitioner as well as client*" (F1). This led to the participants noting that the costs incurred by the psychologists to purchase the WISC filtered down to consumers of their services. Thus, the cost of the test also posed a financial challenge to the test-taker, especially in lower-income settings. Participant 3 stated the following:

> *I remember a student … he needed to go to a remedial school. I needed the WISC for him to go into the remedial school … and his parents couldn't afford it … so now imagine the desperation of a parent whose child desperately needs to go into a remedial school, and they were currently just in a placement school. You know … he was getting bullied now because people started noticing that he wasn't coping and stuff. So, the emotional distress for the parents just because of an expensive test. It's unfair (P3, L225-233).*

This expense to the consumer resulted in participant 1, whose referral base was in Pretoria North townships, making alternative plans to ensure that the services could still be provided to support a test-taker. The following illustrated this:

> *People cannot afford our service. Some you need to give discount; some you need to have a payment plan (P1, L57-58).*

The other participants were asked about how they engaged with this challenge of test-takers not being able to afford the assessment. Participant 2 who worked in the Northern suburbs of Johannesburg, with what she regarded as more affluent clients, stated that she helped those from lower-income settings who were not able to afford educational psychology services by doing pro bono work:

> *… when you say townships … I do, most of those kids are pro bono. So, I do quite a lot of pro bono work in those areas (P2, L35-37).*

The researcher reflected on this dilemma of affordability in the fieldnotes as follows: "*so what do you do*?" (F1). Participants 1 and 3 noted that the alternative to buying the test was renting it from an agency or other psychologists who were willing to share their assessment instruments. However, this also resulted in costs incurred and it too posed challenges to the assessment process.

> *I rent it because it's quite expensive. I think it's about 40 000 (rand) (P1, L89) (see also P3, L74-75, L161-165).*
>
> *To rent it is about 540 (rand) (P1, L91).*

When asked about possible improvements that could be made to make the WISC more contextually appropriate, participant 3 noted that the cost should be considered. Not only would this make it more accessible, but it would make it more relevant. This was illustrated by the following statement:

> *I think that in terms of affordability, it could be adapted so that it could assess more students and be used by the GDE, by psychologists there (P3, L318-319).*

The discussion on cost led to the discussion regarding availability which will be discussed next in sub-theme 3.2.

4.2.3.2 Sub-theme 3.2: Availability

Table 4.7 provides a working definition of availability as well as the inclusion criteria for the sub-theme.

Table 4.7: Working definition and inclusion criteria for sub-theme 3.2

Working definition: Availability
The availability of the test is defined as the extent to which the test is available for use by an individual who does not possess the test.
Inclusion criteria
Any reference made to the availability of the measure. Words used for the identification of data: waiting period, available and time.

As discussed in the previous theme, the participants indicated that due to the high cost of purchasing the WISC the alternative option was hiring. This could be done via test distributors or practitioners who hire out their own assessment measures. However, hiring the measure also posed a variety of challenges such as long waiting periods or getting a previous version of the WISC (WISC-IV) rather than the most recent revision. Hiring the instrument from test distributors came with its own challenges. This was evident in the following statements:

> *There's a waiting period of about three weeks or two weeks, it depends (P1, L91-92).*

> *… the longest I've waited for it was a month (P1, L94).*

When asked how this limited availability affected the clients and his practice, participant 1 indicated that sometimes it was difficult as the child required assessment for accommodation in a short period of time and he had to deal with it appropriately.

> *Sometimes the child needs to be placed next week or they need a concession next week (P1, L 246-247).*

Both participants 1 and 3 also indicated that the WISC edition you got was largely dependent on what was available. This was illustrated in the following excerpts:

> *Which test you get depends on availability (P1, L 311).*

Whenever you call Mindmuzik it's (WISC-V) never available (P3, L198).

The challenges of cost and availability discussed above by participants 1 and 3 were compounded by the participants' perceptions that the Independent Examinations Board (IEB) required only the WISC-V for assessments for the application of accommodations. The following excerpts illustrated this:

> *…the IEB students or learners, it's a requirement. They don't want the SSAIS. Ja, IEB schools want the WISC (P1, L112-113 &115) (see also P3, L210).*

In the fieldnotes, the following was reflected: "*If IEB requires the WISC-V then it poses the continued challenge to both clinician and client due to the challenge of cost and availability*" (F3).

The above challenges of cost and availability were further compounded by the challenges the participants experienced with the standard procedures of the test, which will be discussed in sub-theme 3.

4.2.3.3 Sub-theme 3.3: Standard procedures

Table 4.8 provides a working definition of standard procedures as well as the inclusion criteria for the sub-theme.

Table 4.8: Working definition and inclusion criteria for sub-theme 3.3

Working definition: Standard procedure
Standard procedure refers to the guidelines for administration, recording and scoring which may not be deviated from due to the risk of distorting data (Wechsler, 2014a).
Inclusion criteria
Any reference made to standard procedures of the WISC in practice. Words identified for inclusion of data included policy, anxiety, administration, scoring and interpretation.

One of the challenges related to the administration of the WISC was the number of resources required for the assessment such as stimulus books, answer sheets, a stopwatch and a scoring sheet. It was indicated that these may cause anxiety in both the practitioner as well as the test-taker, along with the potential for fatigue.

Participant 1 indicated that the number of resources could cause anxiety in the learners if they already dealt with anxiety related to school or academic work. This was reflected in the following statement:

> *WISC was creating anxiety. Especially working with so many booklets … because there is your answer sheet, stimulus books, there's too much stuff … it can be intimidating for the child (P1, L142-145).*

The researcher reflected on this in the field notes as follows: "*The administration should be done in such a way that the client cannot see the various materials*" (F1). The creation of anxiety was then discussed with other participants. The challenge of dealing with anxiety caused was identified as the role of the practitioner who should manage the resources as well as the test-takers experience in such a way that anxiety and fatigue were reduced. This was reflected by the following statement made by participant 3:

> *I have been very conscious of a student seeing so many things laid out … I have thought about the fact that it could make a child anxious (P3, L 145-147).*

Furthermore, the researcher reflected in interview two as follows: "standardisation may limit the potential of the child. Would the rigidness result in anxiety?" (F2). This allowed for a discussion around anxiety and the role the clinician plays in limiting it with the ultimate goal of giving the best possible representation of that child. Participant 2 noted:

> *… my feeling is to give the best possible representation of that child, to give him a chance to really reflect his abilities … to get the best out of anybody you need to provide reassurance (P2, L196-199).*

Additionally, due to the number of things that were in rotation, it was indicated that fatigue could set in for both psychologist and client. However, the skill of managing the client was said to be essential to ensuring that fatigue did not hinder administration This was illustrated in the following:

> *Kids get tired and you as the assessor, you get tired because there are so many things, you're using … you need to remember (P1, L225-228).*
>
> *Ja the scoring takes a lot of time and the interpretation and the report writing … it can be a little bit tedious (P1, L240-245).*
>
> *Be very, very clear on breaks … between every subtest … checking in with the child … make sure the child is feeling a little bit settled (P3, L155-159) (see also P2, L251-253).*

The findings of the study as well as some of the reflections that accompanied them were discussed above. In the next section, these findings will be discussed within the context of literature.

4.3 PRESENTING THE FINDINGS OF THE STUDY WITHIN THE CONTEXT OF LITERATURE

The findings of this study suggested that the participants had mixed views regarding the value of the WISC for their clients. Overall, they regarded the WISC as a valuable intelligence test that provided meaningful clinical information and that could be effectively used in conjunction with other assessment media. However, a reservation was expressed regarding its value for all children, especially those from township settings. This reservation could be regarded as valid since it has been found by others that individuals from resource-constrained backgrounds, which the participants in this study identified as learners from township schools, tend to underachieve and obtain lower FSIQ scores on the WISC due to various contextual factors (Shuttleworth-Edwards, 2012).

The participants regarded various contextual factors such as language, level of education and availability of resources as factors affecting test-takers and their scores. This is supported by Foxcroft and Roodt's (2013) position that these factors could have both a direct and indirect influence on intelligence as they could influence the

knowledge and skills children develop, which could in turn affect the scores they are able to obtain.

The findings of the study highlighted language as a particular area of concern. The participants were of the view that the WISC was inappropriate for children whose first language was not English due to the level of language in the WISC being too challenging. It is essential that a test-taker should be able to read, comprehend and respond appropriately to a test (Groth-Marnat & Wright, 2016). Language was also indicated as an area in which the WISC could be made more relevant for their clients, not only in terms of context but also in the extent to which it represented diversity such as the use of diverse, non-European names. The abovementioned linguistic concerns were supported by research which indicated that, in an attempt to increase the appropriateness of the WISC in countries outside the US and UK, language needed to be addressed (Cormier et al., 2016). This was done by lowering the level of language and replacement of context-specific items as items and vocabulary lack contextual relevance – this is because some terminology may be contextually bound such as currency (Braden & Iribarren, 2007; Cormier et al., 2016).

In addition to language, the participants cited the level of education and lack of resources in township areas as significant factors that influenced their decisions to use the WISC. It was indicated that the advanced nature of the WISC disadvantages learners from resource-constrained areas because schools were not able to fully equip them or provide exposure to what was needed to understand all that was required in the WISC. Furthermore, van der Merwe (2019) was also of the view that townships lack educationally stimulating school environments. The participants' concerns were confirmed by research that indicated that under-resourced schooling could directly affect literacy levels, ability to complete tests or test-wiseness, and thus the ability to engage meaningfully with a measure and obtain reliable scores (Foxcroft, 2011; van der Merwe, 2019). Conversely, the participants posited that the use of the WISC was better suited for clients who came from more affluent areas due to the quality of education they received and the access they had to a variety of resources.

It was indicated that it would be beneficial for the WISC to be normed to a South African sample as it would thus indicate consideration of the contextual factors the

participants discussed. Consideration of various contextual factors is important as the WISC is standardised to an international sample and thus the extent to which there is a similarity between the individual taking the test and the sample against which it was normed is essential (Groth-Marnat & Wright, 2016).

In addition to the value of the WISC, the participants highlighted various benefits they believed the WISC held. The participants stated that the WISC-V was engaging test-takers through the use of test aids such as pictures and blocks. They were of the view that it allowed for focused attention as well as assessment in a way that was not characteristically scholastic. This aligned with a statement in the WISC Technical and Interpretation manual that the pictures in the WISC are current and engaging to limit distractibility and allow for more focused attention on the task (Wechsler, 2014b). There is limited research on the extent to which the pictures and blocks in the WISC support attention but in studies that consider the WISC for use with children with Attention-Deficit/Hyperactivity Disorder, it is noted that elements within the WISC not only measure executive functions such as attention but also facilitate the effective use thereof (Şahin et al., 2021).

Regular updating of the WISC was also noted as a benefit. Each revision of the WISC has made increased efforts to ensure that the test remains up to date with both theory and research but also that it accommodates diverse groupings of people (Kezer & Arik, 2012; Na & Burns, 2016; Weiss et al., 2015b). Updated items are also said to improve clinical utility as test-takers are not distracted by dated information (Wechsler, 2014b).

The perceived value of the WISC did not come without the recognition of a variety of challenges. The study revealed that the cost of the WISC was a strong consideration that participants had to weigh up when deciding to acquire it. According to the participants, the cost of the measure had far-reaching implications as it did not only affect the practitioner who needed to purchase the measure, but it also resulted in expensive services to clients.

Research indicates that in the South African context, there are limited resources, both human and financial, for the provision of psychometric services and with the cost of the WISC, at approximately R52 000, the problem is further exacerbated (Laher & Cockcroft, 2013; The JVR Africa Group, 2022). The participants indicated that the

alternative to purchasing was renting the measure, but this posed an additional challenge of delay in testing due to limited availability. Furthermore, with much of the South African population relying on public healthcare (Laher & Cockcroft, 2013), the extent to which the general population has access to the services of educational psychologists needs to be considered. This consideration was highlighted by the discussion of the need for pro bono work and payment plans by all participants of the study.

The participants held the misconception that the IEB stipulated that only the WISC-V could be used for assessments for accommodations. However, this belief was contradictory to policy. The *IEB policy and procedures: Accommodations and exemptions* document indicate that the SSAIS-R, WISC-IV as well as WISC-V are all approved intelligence tests for accommodation applications (Independent Examinations Board, 2022). This would pose a limitation for the younger participants, who had noted this misconception, as it would limit the number of clients they would be able to assist as a result of the abovementioned challenge of affordability and accessibility.

Challenges related to the standard procedure were also noted. The WISC consists of 16 subtests of which 10 are primary and six are secondary. If all subtests are administered it may take between, depending on the age and ability of the test-taker, 86 minutes and 108 minutes (Wechsler, 2014a). Due to the various associated standard procedures and the strict adherence to these procedures, it was noted by the participants that anxiety and fatigue may be experienced by both practitioner and test-taker. Test administrators can become distracted or overwhelmed during administration which could then create distractions and cause anxiety for the test-taker (Rollins & Raiford, 2017). Fatigue is usually the result of strict adherence to established administration procedures, avoiding administration errors, proper recoding of responses and response times and careful comparison of scaled scores during the scoring process (Rollins & Raiford, 2017). Furthermore, the findings indicated that in addition to administration, the scoring process could become tedious and working in an environment with regular referrals may limit the time available to double-check scoring.

4.4 REVISITING THE CONCEPTUAL FRAMEWORK

The conceptual framework of this study was informed by the psychometric concepts that underpin intelligence testing. These included *validity* and *fairness*, specifically cultural fairness, as well as *reliability* and *consistency*. These concepts provided support for the consideration of diversity that underpinned the enquiry of this study, namely the perceived value of the WISC in the South African context. The participants in this study referred to the role the clinician played in establishing and maintaining the reliability and validity of the measurement and the resulting scores. However, they also emphasised the necessity of considering the test-taker so that fatigue and anxiety would not negatively influence the scores they obtained, which too would affect the reliability of the scores.

Moreover, the participants indicated that clinical reasoning was essential in the process of establishing the appropriateness of the WISC in a particular context by considering various demographic factors. Thus, the concept of cultural fairness was also addressed. The participants indicated that due to the diversity that existed within their contexts, it was necessary to evaluate if the WISC would be appropriate for the test-taker in terms of language, exposure, schooling and socio-economic status (Coulacoglou & Saklofske, 2017).

The participants believed that the challenges they experienced with the WISC needed to be addressed to make it more appropriate to the South African context.

4.5 SUMMARY

In this chapter, the findings of the study were reported using themes and sub-themes and evidenced by means of excerpts from the interviews conducted. Thereafter, the findings were discussed in relation to existing literature. Chapter 5 reiterates the findings presented in this chapter and discusses the findings related to the research questions posed in Chapter 1.

CHAPTER 5: CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

The purpose of this exploratory case study was to describe the views of three educational psychologists regarding the value of the WISC for their clients. The literature revealed that, within the South African context, several internationally normed tests are used which may not apply to the uniquely multicultural and heterogenous South African context where a variety of demographic factors such as language, socio-economic status, level and quality of education, exposure and resource availability play a role (Laher & Cockcroft, 2014).

Furthermore, the literature showed that these international intelligence tests may not provide accurate representations of the intellectual abilities of children in the South African context due to it being largely literacy dependent and orientated toward the middle class (Laher & Cockcroft, 2013; Weiss et al., 2015b). However, in addition to the creation of emic tests, studies that showed a movement towards unbiased and reliable tests have emerged in the last two decades (Shuttleworth-Edwards, 2012). An example of this is the WISC which is one of the most widely used intelligence tests but also one of the most updated tests that take into consideration factors of diversity in its revisions (Weiss et al., 2015b). However, it remains that few intelligence tests, including the WISC, have been specifically evaluated for relevance to South African children. As such, by conducting interviews with a demographically diverse sample, this study aimed to explore the views of three educational psychologists about the value of the WISC when they assessed their clients. This final chapter answers the primary research question posed in Chapter 1. This chapter will then reflect on the contributions, challenges and limitations of the study. It will finally discuss recommendations for future research.

5.2 REFLECTING ON THE RESEARCH QUESTIONS

In answering the primary research question, “What are the views of three educational psychologists from Gauteng regarding the value of the WISC for their clients?” the researcher first consider the secondary research questions which guided the study.

5.2.1 Secondary Research Questions

5.2.1.1 Secondary research question one

How relevant do these educational psychologists believe the WISC is for their clients?

The participants in this study were ambivalent with regard to the relevance of the WISC for all their clients. They were of the view that while the WISC holds great value as an intelligence test as it provides an IQ score, allows for the collection of qualitative information and can be used in conjunction with other media, it may lack contextual relevance for certain individuals when various demographic factors such as language, education and access to resources are considered. The WISC was said to hold greater value for clients from more affluent areas where the clients would most likely be exposed to higher quality education, have access to more resources and have a better-developed English vocabulary than clients from resource-constrained areas such as townships where there is presumably lower quality education and lesser use of the English language.

The participants believed that the WISC has various benefits which could contribute to its relevance. These benefits are indicated in the discussion of secondary research question two.

5.2.1.2 Secondary research question two

What benefits do these educational psychologists believe the WISC has for their clients?

The participants were of the view that the engaging nature of the WISC was one of the benefits of using this test with their clients. They felt that the use of pictures made the assessment less intimidating and allowed the test-taker to actively engage. Additionally, the use of the blocks was said to be beneficial as it allows for testing in a manner that is not similar to the traditional academic setting.

The regular updating of the WISC was also noted as a benefit, as the participants believed it meant it was more relevant and recent than other available intelligence measures used in South Africa, such as the SSAIS-R, which was said to be sorely

outdated. The regular updating of the WISC in their view meant that the measure is making use of recent theory, practice and changes, thus making it more trustworthy.

5.2.1.3 Secondary research question three

What challenges do these educational psychologists experience with the WISC?

Most of the challenges that the participants experienced with the WISC related to the affordability of the measure. Younger career practitioners, who participated in this study, felt that the test is too expensive to purchase. Furthermore, the high cost of the measure was said to affect the test-taker, as higher prices would need to be charged for services and many of their clients could not afford these services. The high cost of the measure resulted in having to rent the test which comes with its own challenges. Even though it is more affordable to rent, it is not necessarily more convenient. The reasons for this are that the test is not always available or there are long waiting periods before the WISC (4th or 5th edition) is available, sometimes up to a month. The challenge of availability further limits the ability of the participants to access the measure for urgent assessments, such as concession assessments, thus hindering their ability to provide a critical, time-sensitive service.

It was noted that the administration of the WISC requires several materials such as stimulus cards, response booklets, a stopwatch and record forms to facilitate the activities required in each subtest. Administration of the WISC was said to be more complex and required greater attention which could potentially result in anxiety for the administrator which may in turn cause anxiety in the test-taker. Furthermore, the standard procedures of administration, scoring and recording of the measure were also noted to cause fatigue in both administrator and test-taker.

5.2.2 Primary Research Question

This section will present the conclusions relating to the primary research question as stated in Chapter 1: “What are the views of three educational psychologists from Gauteng regarding the value of the Wechsler Intelligence scale for their clients?”

The participants held ambivalent views regarding the value of the WISC for their clients. While the WISC was said to hold value as a cognitive assessment that allows

for important information about cognitive functioning to be collected, reservations were expressed about its applicability for all children, especially those from resource-constrained environments due to various contextual factors such as language and education. The engaging nature of the test was said to add to the value as it engagingly challenged test-takers. Regular updating of the WISC further added value as the participants held the view that it made it more trustworthy. The participants' views on the value of the WISC were, however, negatively influenced by the challenges of affordability and availability that the participants had experienced. Furthermore, standard procedures, including the norming of the test, would increase the value of the WISC if it were done within the context in which their clients live.

5.3 POTENTIAL CONTRIBUTIONS OF THE STUDY

This study provided insight into the viewpoints of three educational psychologists in the South African context. This qualitative study could potentially serve as a starting point to guide future research into how the WISC could be adapted and made more appropriate for all children in South Africa. The viewpoints of the educational psychologists provided insight into how various demographic factors could potentially pose challenges to the relevance of the WISC in the South African context. This highlights the need to consider South African diversity in the discussion of relevance.

This study could potentially raise awareness amongst psychologists about the advantages, disadvantages and challenges experienced with the WISC. This could possibly allow for the reflection on their own experiences that could lead to improved practices.

5.4 CHALLENGES AND LIMITATIONS OF THE STUDY

When the research process started, the researcher did not foresee struggling to access participants. However, due to the challenges of affordability and availability highlighted above, it became apparent that identifying eight participants who had worked with the WISC was going to be challenging. Further, due to time constraints and the limited scope of this mini-dissertation, the decision was made to do individual interviews with three participants. The findings of this study cannot be generalised, but this was never the purpose of the study. However, the findings did indicate varied experiences and accurate reflections that answered the research questions and thus

still provided valuable information about the views of the three educational psychologists who participated in this study about the value of the WISC. As such, although the study is limited in scope, the findings may still prove valuable for future research on making the WISC more contextually appropriate.

A limitation of the study was that some of the participants held incorrect perceptions regarding the administration and interpretation of the WISC as well as concession assessment policies. These misconceptions could have influenced their view on the value of the WISC.

5.5 RECOMMENDATIONS FOR RESEARCH

The following recommendations are made for future research:

- A survey study to gather South African psychologists' views of the WISC in the South African context. A survey study would allow for the elicitation of a greater variety of views than those presented by the limited sample of this study. Such a study could provide greater data saturation and thus better insight into the views of psychologists about the value of the WISC in the South African context.

- A comparative study that compares the views of psychologists from a variety of settings and different demographic areas within the South African context, may also give insight into the WISC's relevance for all. Such a study could potentially give insight into similarities across various settings and also how different factors related to demographic location may influence psychologists' views on the value of the measure. This would allow for the overall evaluation of the WISC within the South African context.

5.6 CONCLUDING REMARKS

The purpose of this exploratory case study was to explore the views held by educational psychologists regarding the value of the WISC for their clients. Although this study was limited in its sample and scope, its findings could potentially be used to guide further research endeavours into the WISC in the South African context. The findings of this study indicate that there are several ways in which the relevance of the WISC can be determined. These included considering the value it holds as an

intelligence test as well as its practical, contextual and social relevance. Many of the considerations noted by the participants were similar to those stated in the literature. Benefits noted by the participants were not specifically related to the South African context, but rather more general. Challenges highlighted by the participants were both context-specific, such as the cost as well as general, such as challenges related to standard procedure, which were supported by international literature. As such, the findings of this study can be regarded as a starting point for research into how to make the WISC more appropriate for the South African population.

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APPENDICES

APPENDIX A: SEMI-STRUCTURED INTERVIEW SCHEDULE

Educational psychologists' views on the value of the Wechsler Intelligence Scale for Children

Semi-structured interview questions

1. How frequently do you utilise the Wechsler Intelligence Scale for Children in your practice?
2. Is there a specific reason you make use of the WISC rather than other available intelligence tests?
3. What are the demographics in terms of race and language that you typically see with children in your practice?
4. What are some of the experiences you have had administering the Wechsler Intelligence Scale for Children (WISC) with these different children?
   - If discussion provides for a one-sided discussion (e.g. positive experiences), a follow-up question steering it in the opposite direction will be posed.
5. What, in your experience, are some of the advantages of the Wechsler Intelligence Scale for Children (WISC)?
   - Follow-up questions could request for examples should none be given in discussion.
6. What, in your experience, are some of the disadvantages of the Wechsler Intelligence Scale for Children (WISC)?

- Follow-up questions could request for examples should none be given in discussion.

7. Bearing the advantages and disadvantages in mind, to what extent/degree do you feel that the WISC is appropriate for use in the South African context?
8. Do you think the WISC could be better adapted to the South African context? If so, how?

APPENDIX B: PARTICIPANT INFORMED CONSENT FORM

Informed Consent letter to participate in a study titled: "Educational psychologists' views on the value of the Wechsler Intelligence Scale for Children"

Dear prospective participant

I, Juli Janine Smit, am an educational psychology master's degree student at the University of Pretoria working under the guidance of Professor Suzanne Bester. I hereby wish to invite you to participate in a research study where I am the principal investigator. The research will focus on the views of educational psychologists regarding the value of the WISC for their clients.

This letter offers information about the study to help you make an informed decision about participation in this study. If the document does not fully explain or answer any questions you may have, do not hesitate to ask the investigator. Please ensure that you are completely comfortable with the content that will be discussed in the in-person semi-structured interview before you agree to participate.

What is the study about?

The purpose of this study is to explore and describe the views of educational psychologists from Gauteng about the value of the Wechsler Intelligence Scales for Children. These views will be explored in terms of the perceived advantages of the test as well as the challenges and shortcomings that psychologists believe the test holds. These discussions will take place in the form of a semi-structured, in-person

individual interview, and will feed into the broader topic of the extent to which participant psychologists believe the WISC is appropriate for South African use.

I. Your responsibilities as a participant

What does participation involve?

If you voluntarily agree to be part of this study, you will be asked to participate in a semi-structured, in-person individual interview.

The interview will be conducted in person and should last approximately 90 minutes. COVID-19 safety protocols will be put in place to ensure the safety of all participants. These protocols will include the sanitisation of hands, masks that will be worn at all times, and participants that will be seated one and a half metres (1.5 m) apart to ensure social distancing.

The semi-structured individual interview will be guided by an interview schedule, but your open and honest discussion will be encouraged. Interview proceedings will be recorded by means of an audio-recording device for the purposes of transcription and later analysis.

Who may participate in the study?

In order to participate in the study, you should be a voluntary participant who has given informed consent and who:

1. is an educational psychologist in South Africa;
2. is a registered and practicing educational psychologist;
3. has experience with the administration and scoring of the Wechsler Intelligence Scale for Children (WISC).

II. Your rights as a participant

Is participation in the study voluntary?

Your participation in the study is completely voluntary. Should you wish to not consent at all or leave the study at any time, you may do so without any negative

consequences. Additionally, should you wish to withdraw your participation or refuse to answer a question during the interview, you may do so without giving any reason. There will be no negative implications for not consenting or withdrawing from this study.

What are the possible benefits of the study?

There will be no direct benefit to you for your participation in this study. However, you were selected to participate due to your knowledge in your field. Your participation and contribution will add to the knowledge and current understanding of the field of intelligence testing in South Africa.

Your views on the value of the WISC in the South African context will benefit the academic community, as they will contribute to a body of knowledge that highlights the positive and negative elements of the administration of the WISC, as well as insights into how the test could be better adapted for specific contextual use. Additionally, information obtained could contribute to future research regarding appropriate intelligence tests for the diverse South African context.

Will there be any compensation for participation?

Participants of this study will not be compensated by any means. Moreover, no personal monetary costs are involved to take part in this study as the in-person interview will take place on campus. Thus, participants will already be at the research site.

What are the risks associated with the study?

This study holds minimal risk for participants. The categories of risk considered include psychological, economic, physical, or legal risks for any participant.

Will my identity be known?

All personal details will be kept confidential, and should it be noticed that any information is linked back to you or any other participant during transcription, it will be

removed. Additionally, personal details will only be known by the researcher and her supervisor and will not be included in the mini-dissertation.

Will my information be kept confidential?

All records from this study will be regarded as confidential, as each participant and the information they provide, will be linked to a pseudonym (false name) so that data cannot be associated with any participant. Information collected in the interview will be stored in an encrypted, password-protected file. Only the principal investigator, Juli Smit, and her supervisor, Professor Bester, will have access to the data. All data will be stored for a minimum of 15 years after which it will be destroyed.

Secondary data analysis clause

We also would like to request your permission to use your data, confidentially and anonymously, for further research purposes, as the datasets are the intellectual property of the University of Pretoria and where relevant, project funders. Further research may include secondary data analysis and using the data for teaching purposes. The confidentiality and privacy applicable to this study will be binding on future research studies.

III. Questions, comments, or concerns

Has this study received ethics approval?

The proposed research study has been submitted to the Faculty of Education Research Ethics Committee, University of Pretoria, and written approval has been granted by the committee (approval EDU077/21).

Who should I contact if I have questions regarding my participation in the study?

If you have questions at any time about this study, or you require any additional information to assist you in deciding on participation, please do not hesitate to contact Ms Juli Smit.

Contact number: 076 269 9768

Email address: julismit14@gmail.com

Consent form

By signing this consent form, you are not waiving your legal rights nor are you releasing the investigator or the involved institution from their legal and professional responsibilities.

I (the participant) have read, and I (the participant) understand the provided information about the aforementioned research conducted by the principal investigator, Juli Janine Smit. I have had the opportunity to ask questions and have received satisfactory answers. I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason, and without cost. I voluntarily agree to take part in this study.

This study has been reviewed and received ethics approval through the Faculty of Education Research Ethics Committee (approval EDU077/21) at the University of Pretoria.

I agree that the data generated in the interview may be used confidentially and anonymously. The confidentiality and privacy applicable to this study will be binding in future research studies. I understand that the interview will be recorded (audio only) and I give consent that the audio is recorded. I agree of my own free will to participate in the study.

Participant's Name: _____

Signature: _____Date _____

Researcher: Juli Janine Smit

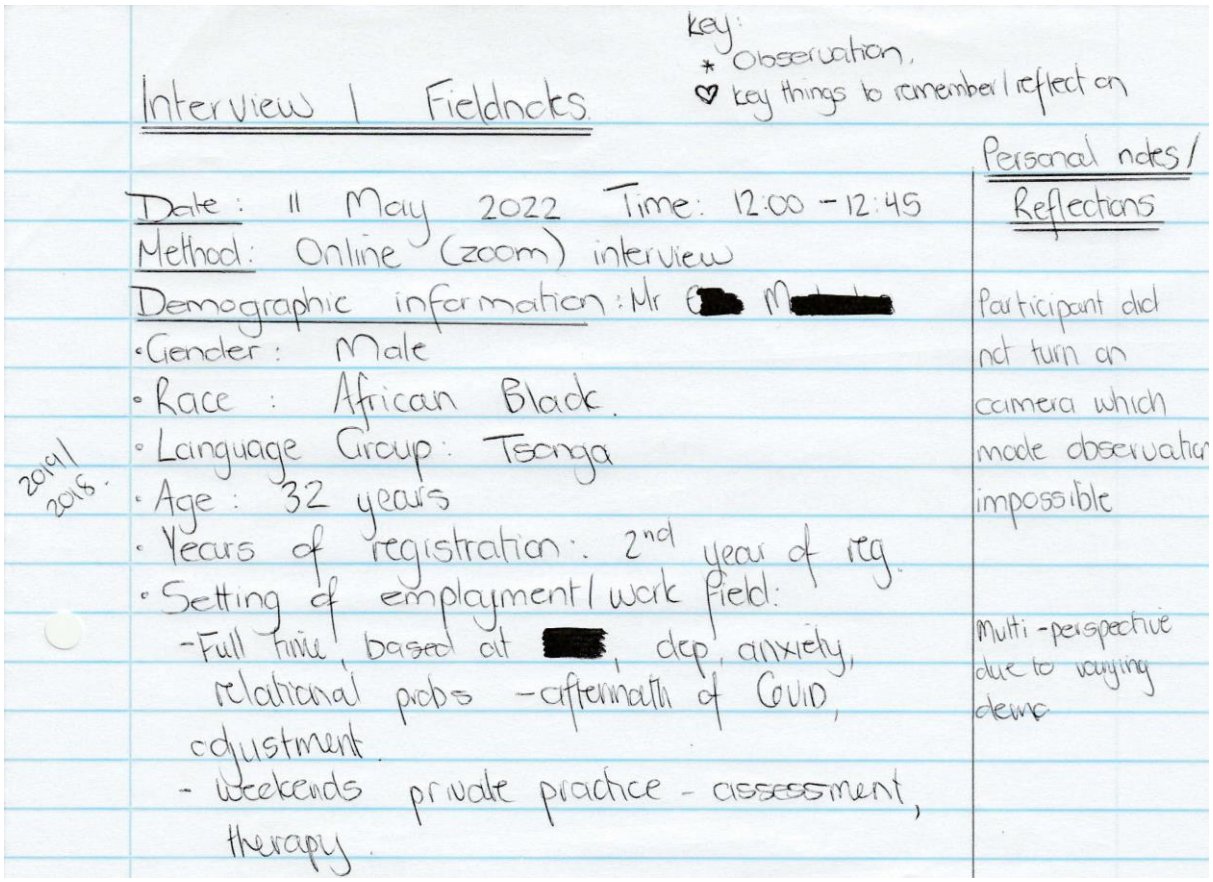
Signature: _____ Date _____

Researcher's supervisor: Professor Suzanne Bester

Signature: _____Date: _____

APPENDIX C: FIELDNOTES INCLUDING INITIAL CODING

Interview 1 fieldnotes



Interview 1 Fieldnotes

key:
* Observation,
♡ key things to remember / reflect on

Personal notes / Reflections

Date: 11 May 2022 Time: 12:00 - 12:45
Method: Online (zoom) interview
Demographic information: Mr [redacted] [redacted]
- Gender: Male
- Race: African Black.
- Language Group: Tsonga
- Age: 32 years
- Years of registration: 2nd year of reg.
- Setting of employment / work field:
  - Full time, based at [redacted], dep, anxiety, relational probs - aftermath of COVID, adjustment.
  - Weekends private practice - assessment, therapy.

2014/2015.

Participant did not turn on camera which made observation impossible

Multi-perspective due to varying demo

Pers. notes / Reflection

Interview process:

① - SSAIS more frequently
- Limited use - twice
- Started private practice (use WIAS at uni)
- Very expensive, rent it for R540, waiting list to use (affects clients) be honest.

Cost? Availability?

WIAS is standardised, uses WIAS-III because of this

Negative impact on client - demand cannot be met due to cost.

So what do you do?

② Use JSAIS, SSAIS, WISC.
- Prefer: IEB - WISC is a requirement
- Demography is NB type of school, English (1st / 2nd lang), home lang
  - Had a case where he needed to discontinue — discontinue after 3rd test
    - Verbal - not understanding instruction
      - not lang barrier
    - Created anxiety "Too many" stuff
      - over stimulation
      - = Anxiety.
- Clinical judgement NB - need to be ethical

IEB requires WISC but is this fair for assess? → Relevance to context

Many factors to consider before use = speaks to relevance for AA *

* Interruption - someone at door

Administration should be done in such a manner that client is not exposed to all materials but I can see how it may make a 'new psych anxious.

③ 2 based - Pta North (Townships) Mabuk
township schools
refered by district / social worker
- Private school in townships (better resources, not equipped enough)

Uni - [redacted], RC, consessions, those who want to apply (WIAS)

Working with client demo that makes up a lot of SA child population
... experience with validity *

2

④ - Can cause anxiety
- Positive.
  - Not as intimidating - pictures
  - Recent laung
  - Updated.
- Negative
  - Takes longer - tired (leads to you)
  - Disc.
  - Stopwatch.
  - Organised.
- ADHD is an issue, snatching.
- Slow pace, put away stimulus book.
- ~~Rstfu~~ Restlessness
- Scoring takes a lot of time
- A lot of work - tedious.

Held greater general validity but may still lack specific relevance.

Discussed Demographics = Race often

- WISC disadvantages township school
- WIAS - SA standardisation
- Want that for the WISC

As before - demo of SA + relevance

7/

8. Investigate the words (verbal) words
Pictures (limited frame of reference) SA context
e.g. locker. - daily exposure

Lang as issue.

Was using IV now V - dependent on what is available.
Too expensive (9 of them who can't afford it)

cost.

3

IV vs. V
- Added subtests.
- Still measuring IQ.
- IV still sufficient.

GAP in SSAIS to WISC-IV :. not calculated

more appropriate as more recent.

Covid made it difficult
- Social distances
- Sharing
- Sanitising

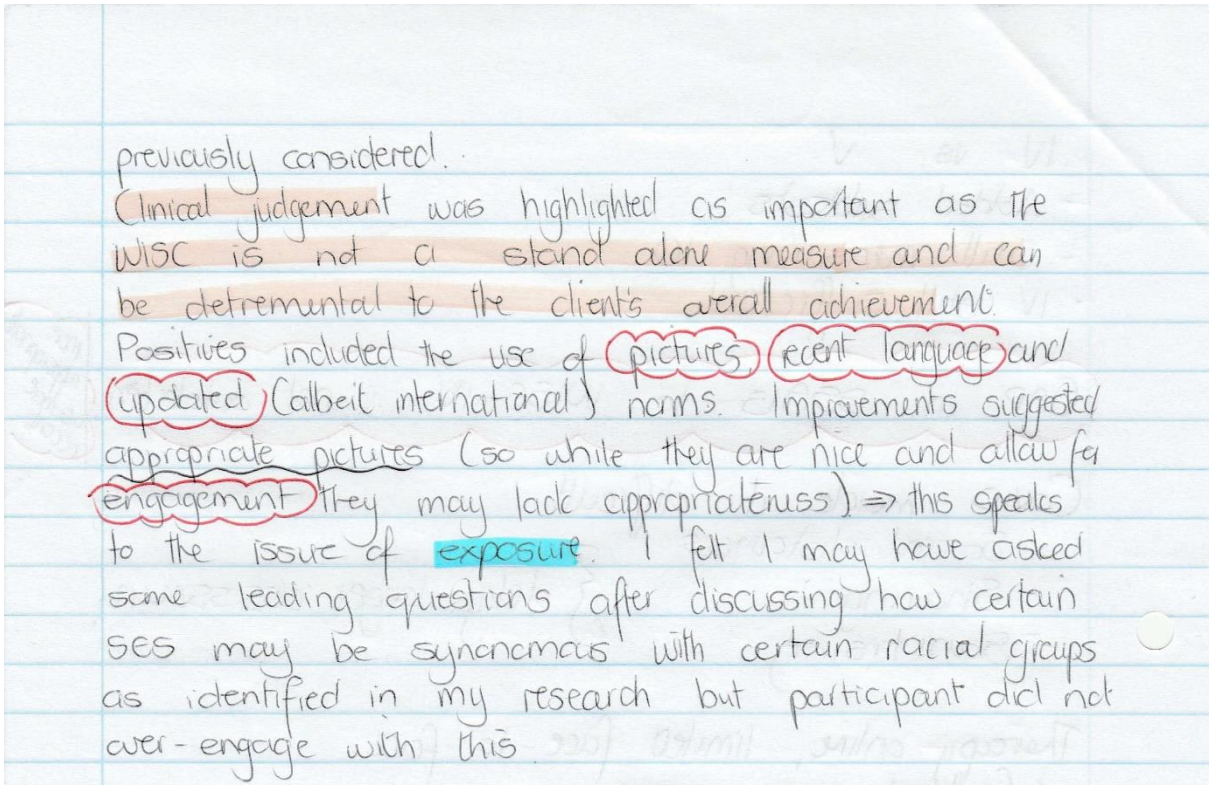
} delay, longer assessment.

Therapy online, limited face-to-face.
↳ feedback over zoom.

Personal Reflection

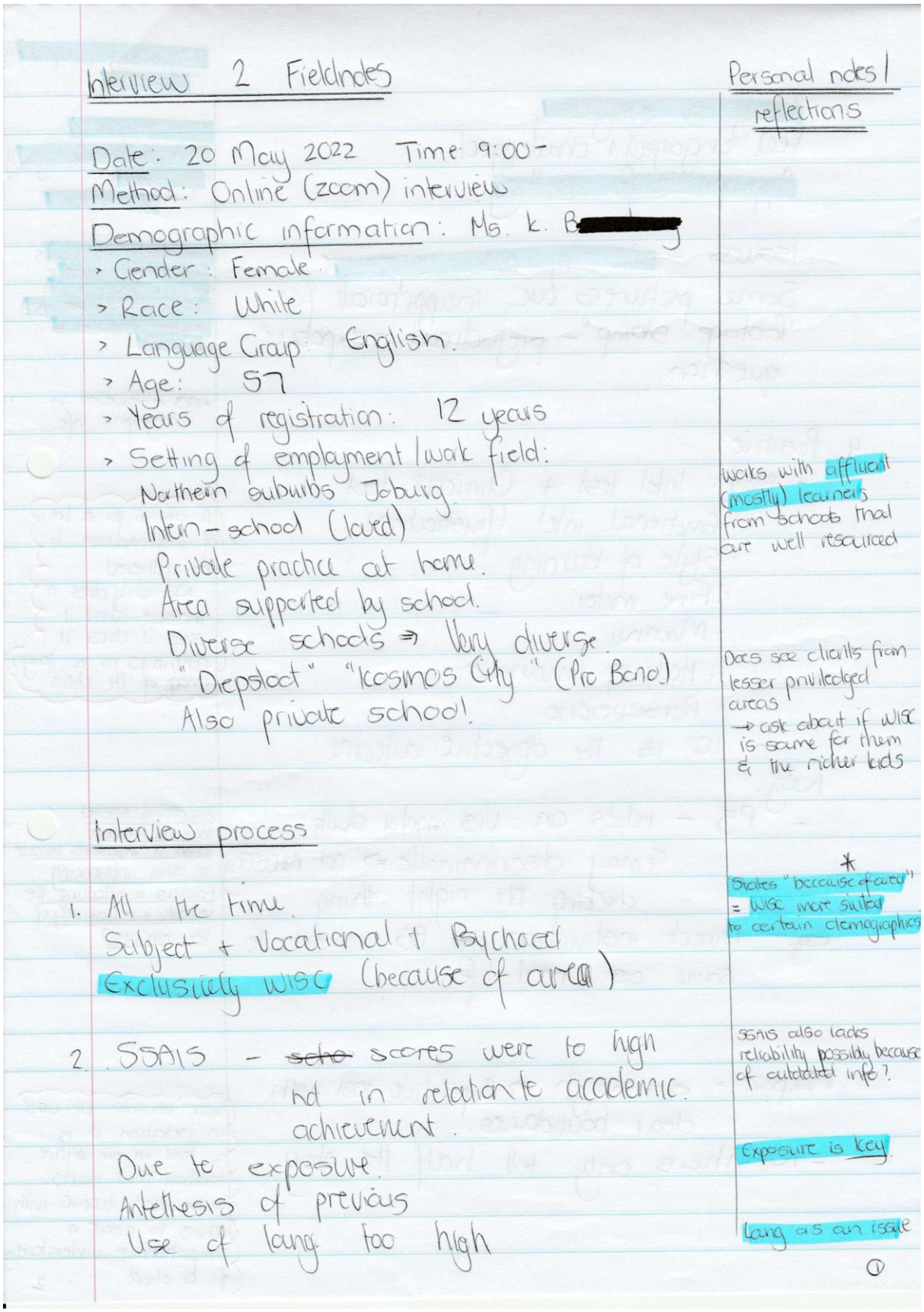
This interview highlighted many elements I had not previously considered. I knew that the test was expensive but did not realise just how few ed psych cannot buy it. Specifically in this interview it was highlighted by the participant that he along with 9 other African Ed psychs are unable to afford the test. This speaks to the great issue of SES and even though there are now funds they might be utilised elsewhere more needed. In addition to this challenge is that it is compounded by availability when renting. Cost is said to negatively impact the client because they are not able to do the assessments. It would need to be considered how much of our population lives in circumstances that would not afford these assessment opportunities (possibly seek stats). The new cost of living would also need to be considered. This participant also highlighted challenges assessors themselves may face which I had not

(4)



previously considered.
Clinical judgement was highlighted as important as the WISC is not a stand alone measure and can be detremental to the client's overall achievement. Positives included the use of pictures, recent language and updated (albeit international) norms. Improvements suggested appropriate pictures (so while they are nice and allow for engagement they may lack appropriateness) ⇒ this speaks to the issue of exposure. I felt I may have asked some leading questions after discussing how certain SES may be synonomous with certain racial groups as identified in my research but participant did not over-engage with this.

Interview 2 fieldnotes



Interview 2 Fieldnotes

Date: 20 May 2022 Time: 9:00-
Method: Online (zoom) interview
Demographic information: Ms. k. B[redacted]g
- Gender: Female
- Race: White
- Language Group: English.
- Age: 57
- Years of registration: 12 years
- Setting of employment/work field:
  Northern suburbs Joburg.
  Intern-school (closed)
  Private practice at home.
  Area supported by school.
  Diverse schools ⇒ very diverse.
  "Diepsloot" "Kosmos City" (Pro Bono)
  Also private school.

Interview process

1. All the time.
   Subject + Vocational + Psychoed
   Exclusively WISC (because of area)

2. SSAIS - ~~scho~~ scores were to high
   hd in relation to academic achievement.
   Due to exposure.
   Antithesis of previous
   Use of lang too high

Personal notes/ reflections

works with affluent (mostly) learners from schools that are well resourced

Does see clients from lesser privileged areas
→ ask about if WISC is same for them & the richer kids

* States "because of area" = WISC more suited to certain demographics

SSAIS also lacks reliability possibly because of outdated info?

Exposure is key

Lang as an issue

①

Lang is everything
Feel engaged & challenged
Appropriate for setting.

Issues - diversity and exposure
Some pictures are inappropriate for "Postage stamp" - prejudical - exposure question.

Lang lacking in representation "John" "Mary"

If the lang is too challenging it will negatively affect scores → SA context?

Problematic elements are diversity + exposure which are key in SA need to consider that what they are exposed to will differ.

*Q3 answered in Demographic info.

4. Positive
- Most: Intel test + Clinical tool
  - Emotional intel (frustration)
  - Style of learning
  - Fine motor
  - Manner
  - Hearing / manners
  - Perseverence
- IQ is the objective outcome.

It allows for a lot of information to be gathered
∴ Not only does it measure what it says it does it contributes to a larger image of the client.

Neg.
- PS - relies on Vis-motor skills
  - may discriminate => not necessarily checking the right thing
- Eg. - Direct instruction of PS is not the same as real-life

Processing speed may not measure what it measures because of other influencing factors = affecting the validity + reliability of the findings

*Repeat = eventhough => Repetitive test with clear boundaries.
- Numbers only tell half the story

WISC cannot be used in isolation. It is a tool in an entire toolbox that needs to be used ALONG with others to create a comprehensive understanding of a client.

2

- I am looking at a much bigger picture
  - Part of the puzzle.
- Many

- Always allow child to give his best foot forward. Can motivate

Standardisation may limit the potential of the child. Rigidness = anxiety.

Assess structured
45 min - 1 hr = Chit-chat., downplay
- allows when they sit down they aren't anxious
- only put down what you need.
- keep it light.

Alteration/planning can be done for smoother transition into assessment. Allow for greater reliability of the findings

- ADHD – got to do with experience
  - slow the whole process down.
  - work WITH client
  - Give something to play with & write in report.

Assessor plays a major role in setting the pace which is something std instruction does not account for
→ Clinical judgement

5. Ad – Enormous as long as appropriate
Not all tests are perfect.
HAVE to use clinical judgement only for diagnostic purpose - do not completely represent the child.

Appropriate
- we need to consider what makes it appropriate?
∴ Clinical judgement is key

only part of the picture.

7. Extremely app dep on exposure
Inapp for those with Eng (not HL)
- not necessarily SSAIS either.

We need to be upfront about the test used

Exposure is so relevant.
Lang is an issue and even in exposed children it may not be their HL.

3

* Probably not app to larger demographics

8. Lang, how it is presented (listed)
Improvements
Diversity lacking in pictures
↳ Names (John, Sue)
Eng named test - limited diversity (ownership)

Personal Reflection:

This interview was hugely informative and highlighted a number of elements that were also seen in the previous interview such as the language used for the test as well as elements in the test such as pictures that more broadly speaks to exposure. Exposure is as diverse as the population itself. Exposure to international things would be largely through media as the use of and access to various devices is linked closely to SES. It was also highlighted that education plays a role in success and it in necessary to consider the education received in less affluent vs. more affluent settings (resources, quality teachers, etc & support). The test also holds many benefits.

A key statement of this interview was

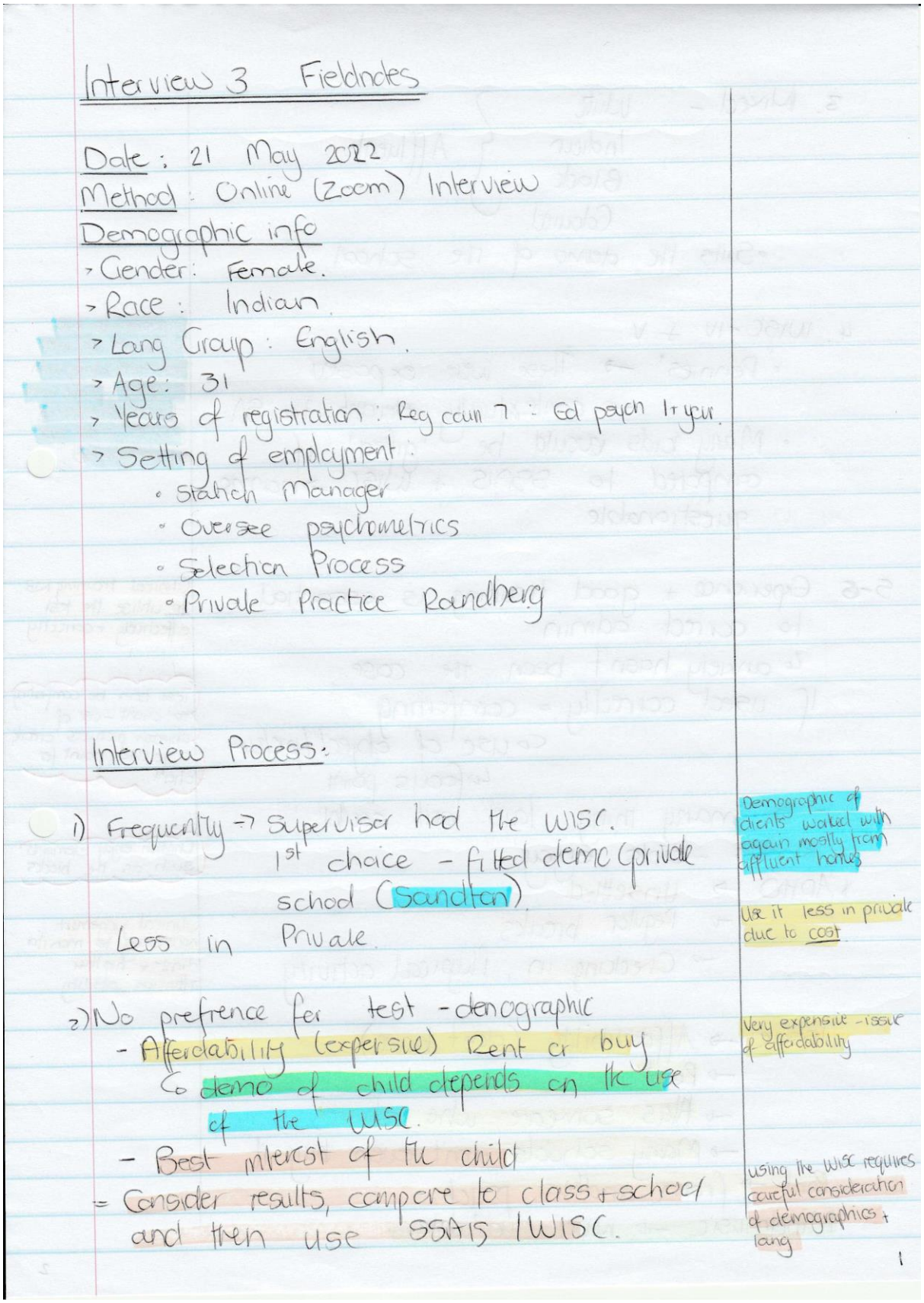
"No test is perfect"

This interview stood in stark contrast to the previous one in terms of demographics (participant & their clients) & experience

Limited mention was made about cost of the measure, may this have been due to number of years of experience or possibly also speak to the ~~et~~ issue of demographics. This would then have a direct impact of the participants discussion of test availability

④

Interview 3 fieldnotes



Interview 3 Fieldnotes

Date: 21 May 2022
Method: Online (Zoom) Interview
Demographic info
- Gender: Female.
- Race: Indian.
- Lang Group: English.
- Age: 31
- Years of registration: Reg coun 7 : Ed psych 1 yr.
- Setting of employment:
  - Statrich Manager
  - Oversee psychometrics
  - Selection Process
  - Private Practice Randberg

Interview Process:

1) Frequently → Supervisor had the WISC.
   1st choice - filled demo (private school (Sandton)
   Less in Private.

2) No prefrence for test - demographic
   - Affordability (expersive) Rent or buy
   ∴ demo of child depends on the use of the WISC.
   - Best interest of the child
   ∴ Consider results, compare to class + school and then use SSAIS / WISC.

Demographic of clients worked with again mostly from affluent homes

Use it less in private due to cost

Very expensive - issue of affordability

using the WISC requires careful consideration of demographics + lang

1

3. Mixed - White, Indian, Black, Coloured } Affluent.
- Suits the demo of the school

4. WISC-IV + V
- "Pennies" → These were exposed → contextually relevant to SA
- Many kids would be "gifted" if compared to SSAIS + WISC → norms questionable.

Exposure is NB for the use of intel test and along with CL long. Works with affluent children & pennies might not be understood.

5-6. Experience + good training is essential to correct admin
↳ anxiety hasn't been the case.
If used correctly = comforting
↳ use of object/picture
↳ focus point
- So many thing laid out could.
+ Blocks - kids enjoy.
+ ADHD → Unsettled
→ Regular breaks
→ Checking in, Physical activity

Clinical training NB to utilise the test effectively + correctly

Test can be comforting to client - use of objects & pictures create a focus point for client.

Children enjoy elements such as the blocks

Clinical judgement necessary to monitor client + his/her attention ability

Issue → Affordibility (don't have)
→ Rent
→ Alas someone who shares
→ Many schools won't even buy it
Rent → from another psych.
Mindmusic → never available.

2

[redacted]

We can rent from others.

Issue → IEB already stipulates they want it
→ IEB want WISC-V not IV
→ Covid getting asses. done was very difficult
Parents afford it is NB ×
↳ deparation

NB WISC-V is required by IEB
- Challenge for both clinician + client
↳ cost & availability

Parental ability to afford is a major considering factor
↳ Greater Demo can't afford.

Amazing tool (brilliant)
It is trusted - SSAIS is sorely outdated.
More relevant than SSAIS - contextually
Works very well with WIAT

It is a great tool
↳ trusted

more relevant context?

Prefer WISC-V (trained in that)
WISC-IV - informal training
↳ similar questions
↳ may have different bell curve.

7. Appropriate for current context
Able to complete on ALL clients
Ver clear results (ADHD, IDD) - contributes to diagnosis

Affluent context

A good clinical tool

Improvements
s Absolutely → wsay Qs are asked (ease of understanding) - 11 lang
→ Affordability to be used by GDE
→ Terms adapted
↳ have international students (accent)

Lang not as big a barrier in private schools

Lang not as big a barrier in private schools.

3

Personal Reflection

The participant, while very friendly and willing to help, had limited experience with the WISC and so did not often elaborate extensively. This made the process rather short yet still informative. This interview corroborated many of the findings from previous interviews in terms of various consideration required when using the WISC (language, ease of understanding, terminology used). Additionally, the cost of the WISC was highlighted as influencing both practitioner and client due to inability to afford it. Something that was highlighted was the use of the WISC-V for accommodations by IEB which may hinder the process of getting these accommodations. Clinical judgement and input was again highlighted as an important element of the assessment process

④

APPENDIX D: INTERVIEW TRANSCRIPTION INCLUING INITIAL CODING

	Interview 1 transcription (40 minutes)
	Introductory conversation held to establish rapport and get acquainted with each other. Discussed participant's completion of their Master's degree and what their research was about. Gained consent to start recording other identifying information was given in further conversation after recording was started and has been removed from transcription as it held no information relevant to study.
	Interviewer: I Participant : P
1 2	**I**: I understand, they're busy. I don't know if you had [redacted] as well when you were still studying.
3	**P**: Oh okay
4 5 6	**I**: She pointed out to use that, right now, you know, educational psychologists are not dealing with what we were previously trained in we are now dealing with the aftermath of COVID
7	**P**: Ja, that's true.
8 9	**I**: Which is so different to, you know, academic assessment and the emotional image is very different now.
10 11 12	**P**: Yes, yes, yes. That's basically what I do five days. Assessments, mostly, I do weekends in my private practice. But my full-time job is therapy and the aftermath of COVID.
13	**I**: Wow

Coding Key

CO1- Cost
CO2- Availability
CO3- Demographics
CO4- Clinical judgement
CO5- Challenges
CO6- anxiety
CO7- Positives
CO8- improvement
CO9-COVID

14	**P**: So, I'm based at a university, [redacted], and the
15	cases are depression, anxiety, relational problems, then academic difficulties
16	but a lot is the aftermath of COVID. Anxiety, depression, adjustment from high
17	school to university. Ja those are some of the cases. There's a whole new
18	need for educational psychologists at university level also, ja.
19	**I**: How long ago did you do your masters Mr M?
20	**P**: I think about 3 years now.
21	**I**: So, you've been a registered psychologist for the last 3 years?
22	**P**: No, masters I was done 3 years, I think 2019 or 2018. But I've been
23	registered for a year now, approaching my second year now.
24	**I**: Okay, so you're in your second year now.
25	**P**: Ja, ja.
26	**I**: Sorry, this is just some of the demographic information I need to get
27	**P**: Oh alright, okay, okay.
28	**I**: And then Mr M, what language group do you belong to?
29	**P**: Uhm, Tsonga or TsiTsonga, it depends on which one you use.
30	**I**: okay. So, I obviously need a demographically diverse group.
31	**P**: Okay
32	**I**: So, its easy to say, white, Indian, Black but that's not necessarily your race.
33	So which race group do you belong to?
34	**P**: African Black

35 36 37 38 39 40	**I**: Because obviously with the WICS, the whole, I might be directing the research but I as a white female might feel that it is relevant, but it is because I have never worked with children, I have never seen children from disadvantaged environments, seen how they deal with it. For example, when I looked through, I think it was the SSAIS, even I thought, wow, even I don't know this, because it hasn't been revised in so long
41	**P**: Yes!
42 43	**I**: So that is the direction we are trying to take with the WISC. Just trying to understand whether its relevant to our field
44	**P**: Ja
45	**I**: And then Mr M. if you don't mind, what is your age at the moment.
46	**P**: I'm 32 now
47	**I**: Okay. And you said on weekends you're also in private practice
48 49 50 51	**P**: Ja, private practice, assessment weekends but also after hours its therapy. But I mean, uh, for school kids or university students I do on weekends assessments. I don't do assessments during the week. If its within my job, yes. But for private practice I see them on weekends.
52 53	**I**: Sjoe, that sounds so demanding I can understand why you are so busy (laughs)
54	**P**: It is! It is ja (laughs). I don't want to lie, it is.
55	**I**: But I mean its good news as well, for me.
56 57 58 59	**P**: Oh yes! It is because you can make a good salary on both. It just that with our background people don't afford the service. That's the tricky part, in terms of some you need to give discount, some you need to have a payment plan. Ja, so those re the challenges.

CO1.1. our service costs

60 61 62 63 64	**I**: Yes, and some of the challenges we're facing now is many of them, so you know for your internship there was a list that you could go to schools and stuff. Many of those schools that we have approached, that were previously HPCSA accredited are now saying that the department of education is no longer paying for interns in the schools.
65	**P**: Yes, I've heard about that.
66	**I**: But that's where they need us, its where we need to be!
67	**P**: Ja! That's true
68 69 70	**I**: It's such a catch 22, but anyway. So again Mr M. I just have some, eight, semi-structures questions that kinds of just guide you in the discussion, it's not prescriptive in any way. I don't see this taking a full 90 minutes, I really don't.
71	**P**: Okay, no problem
72 73	**I**: Your honest opinion would be very valued, and I am just taking notes, because field notes is one of my things.
74	**P**: It's okay, I understand (laughs)
75 76	**I**: So just the first question. How frequently do you utilise, or have you utilised the WISC, in your practice?
77	**P**: The number of times?
78 79	**I**: Or just how frequently. I know you said you now administer the SSAIS more frequently
80 81 82	**P**: I think, if I can say this year, I've administered it twice. Uhm, last year, I think about twice again. Because I started private practice last year, so I think I'm in it for like 7 months, so I think I've only administered it 4 times
83	**I**: Okay and you use it in your private practice and not at the university?

84	**P**: No. Here (the university) I use the WIAS, its adults here.	
85	**I**: Oh! Yes, of course	
86	**P**: So, WAIS is the adult version of WISC	
87 88	**I**: Yes, yes, okay. Uhm, do you, do you. So, you use the SSAIS and for your private practice did you purchase the WISC?	
89	**P**: No, I rent it out because its quite expensive. I think it's about 40 000 (rand)	CO1.2 cost
90	**I**: Yes, its super expensive	
91 92	**P**: So, to rent it out its about 540 (rand) and you wait (laughs). There's a waiting period of about 3 weeks or 2 weeks, it depends	CO1.3 cost to rent
93	**I**: Okay	
94	**P**: But you wait for it. I think the longest I waited for it was a month.	
95	**I**: That's crazy	
96	**P**: Ja	
97	**I**: And then do you then have to book your clients according to that waiting list?	
98 99 100 101 102 103	**P**: Ja. So now, before you confirm with your client you have to book it with 'Mind Music" then confirm with your client that you can only reach their appointment. I think just being honest with them, I'm honest because then the people are like why are you giving me such an appointment for a month after. So just say, some assessment we rent them out and then they can only be available at a certain period and then they understand where you are from	CO1.3. renting
104 105	**I**: Okay. And do you use just the WISC in private practice or do you use the SSAIS and JSAIS as well	
106	**P**: I use all of them. So, I use the South African JSAIS and SSAIS.	

107	**I**: Okay	
108	**P**: Then I use the WISC and the WAIS	
109 110 111	**I**: Okay. The second question, just following on that. Is there a specific reason you make use of the WISC or, you know, the others? Do you have a specific preference for one of them?	
112 113	**P**: Yes, yes, I do. So, for example, the IEB students or learners, it's a requirement. They don't want the SSAIS	CO5.1- IEB
114	**I**: Oh	
115 116 117 118 119 120 121 122 123 124 125	**P**: Ja, IEB schools want the WISC. But then I need to check the demographic of the student. Whether they are, in childhood, what school they went to, the type of school, is it model C, formal model c? And then also if English is their first language, at school, of second language, and just the area they are from, at home do they speak English or do they speak an African language. So, I need to take that into consideration first before I can decide whether to use the WISC or not. Uhm, in one case, even though I gathered all this information, I had to discontinue the WISC. And the child was English speaking, uhm, from a good school, but I thought the WISC was disadvantaging her, and I think after the 3rd subtest I had to discontinue, and I started using the SSAIS and she started to do well in the SSAIS	CO5.1- IEB requires WISC CO3.1
126 127 128	**I**: Oh okay. What do you think about the WISC caused, what about the WISC resulted in disadvantaging her? Was she just struggling with the language or the vocabulary? Or what about the WISC was disadvantaging her?	
129	**P**: Just give me one sec, someone is at my door	
130	*1 minute interruption*	
131	**P**: Sorry about that, that was my admin.	
132	**I**: No problem:	

133 134 135 136 137 138	**P**: I think it was in the Verbal, she was not understanding the instruction and it was clearly not a language barrier, but I think in terms of what was required of her she was not understanding the questions. So, I think when on the 3rd subtest I could see that uhm, it was probably going to say that she has Intellectual Disability and I thought no, I don't think she qualifies for that so that is why stopped, and I started using the SSAIS.	CO3.2
139 140	**I**: Okay. And was this also for an accommodation or did she just come for a general test so…	
141 142 143 144 145 146 147	**P**: No, it was a behavioural problem but she has anxiety, I think she was nine. And there were signs of anxiety and the WISC was just creating anxiety. Especially working with so many booklets, if you think about the WISC, because there is you answer sheet, stimulus book, there's just too many stuff that there that's also a little bit intimidating for the child. There is a lot of sensory stimulation. There are a lot of pictures, objects so that stimulation, I think, caused anxiety for her so ja, I think that's why we stopped.	CO6 anxiety
148 149 150	**I**: That's such a valid point. I had never considered the effect all the stimulus books could have on the client. We're just so busy concentrating on saying the right thing (laugh) at this point in time. I'd never actually considered it.	
151 152 153 154 155	**P**: I think at school (university) especially under the supervisors you're focusing on saying the correct instruction but in private practice it is relaxed, and you need to check your observation and how the child is performing, whether they are coping or not coping. So those are the things that will determine whether to continue with such a test or not.	CO4- clinical
156 157	**I**: Okay, alright. I did actually know you could discontinue and test and then administer a different one. So, its very interesting.	
158 159 160	**P**: I think it's a judgement you need to make as a professional because if I didn't, as I say, I think it also comes with knowledge, because you're discontinuing, after maybe it says 4 consecutive zeros, but you can see, oh if	CO4- clinical

161 162	I continue with this its unethical, the child will be diagnosed with intellectual disability. I was right because when I did the SSAIS, she scored average.	
163	**I**: That's really interesting. I did not know we could do that.	
164	**P**: I don't think they want you to know that right now (Laughs)	
165	**I**: I don't know if you trained under [redacted]	
166	**P**: Yes, it was under [redacted]	
167 168 169 170	**I**: We don't have [redacted] anymore but in the very first demonstration I said something like I am going to say two words. Tell me how they are similar or alike. Do not guess, blah blah blah, and then I just said, 'do your best' and before I was even finished [redacted] went 'no'. (laughs)	
171	**P**: (laughs) Ja I understand.	
172	**I**: Mr M, what is the general demographic of the clients you work with?	
173 174 175 176 177	**P**: Okay so, for me, I'm based at 2 places. I'm based in Waterkloof and also Pretoria North, Orchards but most of my clients come from the Pretoria North side so these are the townships. So, its Mabugwane, Soshanguve, Hammanskraal, Ga-Rankuwa, and from you Pretoria North side, Orchard, Teresapark but the large pool comes from the townships	CO3.3. Area
178 179	**I**: Okay, so do they, I don't know this is an assumption, do most of them come from township schools as well or…	
180 181 182 183 184 185	**P**: Yes, they come from townships schools. So, some are referred by the District, Tswane West District, and then some, they are referred by the social worker from the school if the school doesn't have like a psychologist. But now, townships are changing. There are private schools within townships now. So, some of the kids are referred from these private schools at the townships. That's also where I'm getting a large pool of students.	CO3.3. Area

186 187	**I**: Just on the private school in the townships do you find them to have better resourcing than the other townships schools or do they continue to struggle	
188 189 190 191 192 193	**P**: Ja, they have better resources but are still not equipped enough. Because when you go for school visits, it's just a normal school. They don't have a library; they don't have like playgrounds. It's just a few learners in the class and they use English as their teaching and then may be second language will be Afrikaans but it's still not where it's supposed to be if you compare with one in town or other well-developed areas	CO3.3. Area (SES) CO3.2
194 195 196 197	**I**: Sjoe okay, I'm learning so much. I didn't even know that. Like, ja, I mean in our lectures last year we keep getting drilled on we need to work in low resource settings, we need to know how to use what they have, stones, leaves, whatever.	
198	**P**: Ja.	
199	**I**: And then the demographic at the university	
200	**P**: Okay. In terms of the clients I get from the university?	
201	**I**: Yes, the demographics there.	
202 203 204 205 206 207 208	**P**: So, most of them will be from here [redacted] and also, I've had one who was applying to see which university he wanted to get in to. But in terms of the university, most of them get assessed at their own university. Whether it be concessions or additional support. But the ones I'm getting are the ones who are wanting to apply for university. So those are the pool of clients that I get. But the ones I get are the ones that are in the university, but I don't get a lot of UJ, WITS because they already have centre where they can get assessed.	
209	**I**: And it's here at the university where you use the WAIS?	
210	**P**: The WAIS, I use it at the university and also at my private practice.	

211 212	**I**: Okay, and does the university supply it or do you have to rent that one as well.	
213	**P**: Not the university does supply, we do have those assessments.	
214 215 216 217 218	**I**: Okay perfect, and then just, some of these questions may have been answered. But this one says what are some of the experiences you have had administering the WISC with different children? So, I know like you said, it causes anxiety in some leaners. What are some of the other experiences you've had?	CO3.6
219 220 221 222 223 224 225 226 227 228 229	**P**: Okay. Positive experiences. It is not as intimidating as the SSAIS, there's pictures, its engaging. So, for other kids they thrive in that. Uhm, and in then in terms of the language it is recent, I think. Some of the things that are asked are very recent, its updated because they are exposed to TV, they are exposed to some of the language now. So that for me is fine. I don't think there's anything else, maybe I will remember. For me those are the positive ones. On the negative ones it takes longer than SSAIS, so kids do get tired and you as the assessor, you get tired because there's so many things you're using, stimulus books, answer sheet, you need to remember after 4 consecutive zeros you discontinue, there's a stop watch. So ja, if you have ADHD as an assessor its quite hectic (laughs)	CO7.1 pictures CO7.2. CO5.2.
230	**I**: Yes, I can imagine. Even without ADHD it's a lot to remember (laughs)	
231 232 233 234 235 236 237 238 239	**P**: Ja it's a lot to remember so you need to be organised and plan in time because if you're not organised the child will disorganise you (laughs). Especially in most of the kids I've assessed, a lot have ADHD, so while you're still trying to take the stimulus book, they've grabbed the other one, blocks… so ja. It's a lot of things you need to take into consideration. It needs you to work at a pace, slow, if you're done with one stimulus book, put it away, just like that, make sure you are well organised. And then just check that the learner is not getting restless or irritable and also are they not over stimulated. So those are some of the things that, in my experience, I do check with the	CO5.2 CO4 clinical

240 241 242 243 244 245 246 247	WISC. Hmmm, what else? Oh, the scoring takes time, also. Ja the scoring takes a lot of time and the interpretation and the report writing. Ja, because if you check the SSAIS its only verbal and nonverbal. The WISC is four indexes so it does take a lot of time to write the report and interpret, so ja, it can be a little bit tedious especially if you are in private practice because the parents want the report within a week or two. It's not like at school (university) where you can take a month. The child needs to be placed next week, or they need concession next week.	
248 249 250 251	**I**: Oh okay, sjoe, that close! Coming for the assessment just before they need the concession. That's a bit hectic. So would you say, do you have a preference between the SSAIS, JSAIS and WISC. The JSAIS is a little bit young but between the SSAIS and the WISC.	
252 253 254 255	**P**: Uhm, it's a difficult question because I don't prefer both, let me just be honest. The SSAIS is outdated, some of the words, like you say, are just not relevant. The WISC disadvantages the kids from the townships. That's why I'm saying, it's a catch 22 this one.	CO3.3. Area
256	**I**: Yes	
257 258 259	**P**: What I like with the WAIS is that they've standardised it for South Africans. So, for some of them the words are South African, some of the questions are South African and the norms. My wish is for the WISC to be done like that also	CO8
260	**I**: Okay	
261 262 263 264 265 266 267	**P**: So that you can have an option to use an international one or the South African one. But with the WISC it's just the WISC, there's no SA standard. So, for now, because I don't have a choice, I mostly use the SSAIS. But if the school has already indicated what type of assessment they want, and these are the batteries they want I will have to use the WISC but it depends on the type of referral and the background of the child and they school they are from. Ja.	Due to lack of norms CO8 it poses a challenge result in CO5

268 269	**I**: Alright. Sorry, I'm just looking at the next questions, because it asks for advantages and then the following is the disadvantages.	
270	**P**: Oh okay	
271 272 273 274 275	**I**: That basically what we just discussed is that there are positive and negative aspects. Uhm, do you think the negative aspects of the WISC, you know, like it taking quite long etc, do you think it's, in our context specifically, do you think it. uhm.. how could it be made more relevant to our context? What do you think could be done to make it better for everyone?	
276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292	**P**; I think they need to investigate some of the words that are used, in terms of especially the verbal. I think problem solving, it's okay, but I think in one of the questions they will ask you what is missing in the picture of a locker. Some of the pictures, if you think about the daily life of a township child, they are not exposed to some of these pictures so now they need to guess what's missing but they've never seen such an image. So it needs to be south African context. A door, its something we all know, but there's other things that it might be the first time they are experiencing it. I think there is something like a locker and they need to say what's missing from that picture, they've never seen a locker, they don't have lockers at school so also the context in terms of now you're measuring this child whose never been exposed to something like that. Ja so those are some of the things I would say they need to take into consideration in terms of it should be things kids are exposed to daily and in terms of their lives. So, research like this needs to be done where they inform people who are in charge of the WISC in terms of what are the daily things. Yes, I understand it gets elevated in terms of other pictures but still it must not disadvantage a child and put them maybe below average or borderline… ja.	CO8 improvements CO3.3. language CO3.4. Exposure
293 294 295	**I**: Yes, because with the whole research I've done. Yu knows, you need to be so careful not to… and unfortunately, still today in South Africa race is often synonymous with Socio-economic status	
296	**P**: Yes!	

297 298 299 300 301 302 303 304	**I**: So, you know, you're not finding white kids in the township schools. You might, every now and then, in other poorer white areas, you might find the same experiences but unfortunately, they greater demographic of the township children who are coming, you know, their race is synonymous with educational attainment opportunities and that's why I'm doing this research in terms of, you know the white kids in Curro or whatever they understand a locker, they watch TV. So, I definitely think... you know when we administer it were like oh ja I know this.	
305	**P**: Ja ja its true	
306	**I**: Except some of the math things, even I struggle (laugh)	
307	**P**: (laughs)	
308 309 310	**I**: I do think that it does need to be made more relevant to our context. Because I know WISC-III, I think it was the third revision, that had a South African standardisation as well. Do you use WISC-IV or WISC-V in practice	
311 312	**P**: I was using four but now, it also depends, Juli, on when you rent out which one is available	CO2
313	**I**: Oh	
314 315 316 317 318 319	**P**: So, it also depends on that because we can't afford it as psychologists. I think I have about 9 ed psychs, and its African Ed psychs, not even one has WISC or WAIS so we can't afford the WISC. So, imagine is all nine of us have nine WISC clients we want to rent out, they say if the fourth one or fifth on is there you will get your hands on whichever one is present. But I mostly use the four but last time I used the five but like I say, it depends on their availability.	CO1.2 cost of the test CO2
320	**I**: And do you find major differences between four and five?	
321 322 323	**P**: I think there's two added subtests, I don't have my reports now, I'm not sure but I think there's one added or one index has two more tests, I'm not sure, something like that but it still gives you the same response, you're still	

measuring IQ. I don't think there's so much difference it's just now they've added some two subtests or distinguish between two subtests or something like that. Ja…

I: Okay, alright. So, you don't feel that WISC-IV is outdated and that it can no longer be used. It's still a sufficient thing to use.

P: Ja I think it's still sufficient because with the international ones, sjoe, they keep on updating while you're still using the other one. But if you look at the gap from SSASI to WISC-IV, you're like oh (sigh) the SSAIS is still way behind so I don't think its outdated but preferably, if you have access to the WISC-V use the WISC-V

CO5.4 regular updating makes it difficult to keep up

I: Okay, alright. Well Mr M, that basically answers all the questions

P: Oh okay, I hope I was helpful

I: It definitely did go faster than I thought and, I mean, online is never as nice as in person. Sorry just on that. Have you found that, especially when COVID was at its peak, I mean were still doing quite a bit of online? Did you feel that that made administration quite difficult? Because I know that there is now social distancing and masks, did you find that COVID affected the administration at all?

P: Sjoe, it was quite difficult because before administration you needed to make sure social distancing, but it becomes so difficult, you're sharing blocks and books and answer sheet and you need to be sanitising, it caused a lot of delay. It made assessment much longer so ja it was quite hectic. It just made it so long that you'd just get tired at the end of the day or that you need two days to do the assessment. So ja, COVID did affect how we practice and also now, some of the therapy you have to do them online. There was a limit in terms of face-to-face interaction with therapy. And feedback after the assessment, you would provide feedback over zoom with the parents at their home. So, it kind of changed the structure of your practice.

CO9- COVID

352 353	**I**: Well, thank you so much Mr M, that was really great. I was very nervous for my first interview
354	**P**: That's okay
355 356 357	**I**: Thank you so much for your contribution and your willingness to participate, I really do appreciate it and that then concludes this interview. Is there anything else you would like to add?
358 359 360	**P**: No, you will update me if there is anything or extra questions, I know, if maybe you dint have enough data you might need to come back, I'm available. Just be patient with me if I'm not answering on time, I do get very busy.
	Recording was ended here but participant just needed to resend informed consent as signature was not showing in his attachment.

	Interview 2: (90 minutes)
	Introductory conversation and building of rapport. Discuss correct pronunciation of surname. Consent obtained to start recording
	Interviewer: I Participant: P
1 2 3 4 5 6	**I**: Okay, so there is just some demographic questions that I need to find out first because obviously I have a demographically diverse sample, you know, I have a black, a white and an Indian participant. Just because obviously our perspectives might differ according to our upbringing, on the WISC and its various elements. So I never assume race, so (laughs) what would you say your race is.
7	**P**: I am white, yes.
8	I: And your language group?
9	**P**: English
10	I: And if you don't mind sharing your age?
11	**P**: Not at all, 57, I think (laughs). You know after 50 you lose track.
12	**I**: My dad also says it's all a blur
13	**P**: Exactly, he is right!
14	**I**: And then, your years of registration? How long have you been registered?
15 16 17	**P**: Only 12 years. So, I took the scenic route. I was much like you, always had this passion for people but only when I had children did I discover which direction I was going.

18 19 20	**I**: The other things here is just to establish your work setting or field of employment. It could be currently or over the past 12 years, the environments in which you've worked.	
21 22 23 24 25 26 27 28	**P**: So, obviously, when I worked in my internship I worked within a school which I really loved and it was an amazing experience but since then I've been in private practice. So I work on my own. I have an office at my home in an area that is quite strongly supported by a number of schools. So I see a lot of diverse kids. I see all the way from the (Affluent Private School's name) to (moderately affluent government school) to the private schools within this area to even some of the kids form more government schools but I'm talking like a Nooitgedacht that is really largely supported by black kids.	
29 30 31	**I**: Okay, so you would say that you have quite a diverse clientele group as well. Do you know if you have any children from townships or that type of thing.	
32 33 34 35 36 37	**P**: I do. But I will tell you that most of my kids from townships… when you say townships I'm talking like Diepsloot, which I don't know if its classified as a township anymore or Cosmos city. I do, but most of those kids are pro bono. So, I do quite a lot of pro bono work in those areas. I mean the kids coming from private school, unless there's and issue, the obviously are paying clients. But I do do quite a bit of pro bono.	CO1.1. cost of services
38 39 40 41 42 43 44 45 46 47	**I**: Oh okay. So, this interview, it was originally a focus group interview so the questions are of such a nature that it would foster general discussion, so they are not super specific and I found with my first interview, often, a lot of the questions were answered already by answering the earlier questions. So, for example, you've already answered one question (laughs). So, you know, it's just conversational, just giving me your honest experience with the WISC as well as other intelligence tests because it does allow me to see preference, possibly some downfalls that we may have in the WISC that have been overlooked. There are just 8 questions so I don't think we will take a full hour and then, should this cut out, because zoom keeps warning	

48 49	me that I have 40 minutes, but I don't think I do, it has never cut me out before.	
50 51 52 53	**P**: You are very lucky, up until a few weeks ago, it was doing nothing to me, it was letting me have my whole hour and a half and then more recently it cut me off beautifully at 40 minutes. So, it may very well cut us off but then you'll just send me another link.	
54 55 56	**I**: I'm just not sure if it may delay me sending another link for a little while because it has to convert the recording but as soon as I can, it might be like 5 minutes, I will send a new link.	
57	**P**: Don't stress, that's perfect.	
58 59	**I**: Okay so the first question here says how frequently do you utilise the WISC in your practice?	
60 61 62 63 64 65	**P**: Okay, I use the WISC all the time. I must be honest. So, I do a lot of subject choice assessment, I do a lot of vocational assessments and I do a lot of psychoeducational assessments and I must be honest, almost exclusively now… So in the past, in the early years of my practice I would sometimes use the SSAIS but because of the area I'm in I am 100% using the WISC at least once a week, sometimes a lot more than that	CO3.3. Area
66 67	**I**: Okay that's interesting that the area… but I'm also assuming a lot of the schools in the area are IEB schools	
68	**P**: Ja.	
69 70 71	**I**: Okay. Is there a specific reason, other than the IEB schools that you use the WISC. I know you said the area, so what exactly to you mean by the area?	
72 73 74	**P**: So what I was finding when I was using the SSAIS, that the scores were actually too high, the scores that the kids were achieving were too high and were not in relation to what they were actually achieving academically. I find	CO3.3 area CO 3.4. exposure

75	that the WISC gives a much more realistic picture of their profile. Especially	
76	in this area, the kids are overly exposed and as you said, you know, they	
77	have a lot of advantages that kids in other areas wouldn't have. So, I think	
78	it's quite unique in this area. I think to use the SSAIS would not be as	
79	valuable as the WISC.	
80	**I**: Yes, the exposure, we were talking about it in my previous interview,	
81	exposure plays such a big role in general knowledge firstly, which plays into	
82	their academic knowledge and academic achievement. My previous	
83	participant had all the Pretoria North townships were his clients and he said	
84	that he really struggles with the WISC. They just don't understand what is	
85	being asked of them a lot of the time.	
86	**P**: I agree, agreed. So, I am exactly the antithesis of where he is. So, if I	CO3.3 Area
87	was exclusively working with kids from the townships or more	CO3.2.
88	disadvantaged areas I would definitely not use the WISC it is far to	Language
89	advanced and the use of language is much too high, honestly. So ja, you	
90	have basically chosen two people on the opposite ends of the scale. Which	
91	is very valuable.	
92	I: Yes, it is very helpful. So, what other elements of the WISC do you think	
93	play better to your environment, other than the language?	
94	**P**: I mean, I think language is everything in this situation because of the way	CO3.2
95	you approach it. I think the children feel engaged and they feel challenged.	language
96	I just think that the way the test has been formulated is appropriate for the	CO7.2
97	educational setting that I am dealing with. I mean, there are definitely some	engaging
98	issues, there's no question but those issues are more to do with diversity	
99	and exposure than anything else. I just think it suits the environment in which	
100	I'm working but definitely not perfect for all environments.	
101	**I**: Yes, the previous participant was like "what is a locker even to these kids?"	
102	(laughs)	

P: No, I'm serious. There are so many things. Like, some of the pictures that are used are just like completely inappropriate for a South African context. A snowman, I mean kids will know, but a lot of them will never have seen a snowman or a sleigh. I mean, repeated quite a few times. There's a postage stamp, kids have no idea what a postage stamp is, have never seen one, will never see one and that's right across the line. I mean, that's not just… I mean one of the questions is 'why do we put a postage stamp on a letter?". And I promise you, they have no clue at all. And that's prejudicial because no one is going to get that right, its not really an intelligence questions, its and exposure question.

CO5.3. Inappropriate to SA

CO3.4 exposure

I: So all of these questions kind of follow on each other, so we've done the demographics question already. So, this says, what are some of the experiences you've had with the WISC, both positive and negative.

P: Okay, so I think the most positive about the WISC, I think about any IQ assessment, not only is an intelligence test but it is a clinical tool. You know how you were talking yesterday about observing. So in the process of doing an assessment you get to look at so much more than just intelligence. Its almost like being a sleuth or some kind of private detective because you are not only watching what are they able to respond to, you're looking at all kinds of other things. You're looking, I mean, crazy enough, you're looking at emotional intelligence; what happens when they are frustrated and how to the deal with something when they can't manage and they feel like they should be getting it. You're looking at they style of learning, so do they read things out loud, do they talk to themselves while working, how are they sitting, what's their fine motor dexterity, do they say pardon a lot, do they hear first time, do they respond immediately. There's just like… what is their perseverance. So its almost like, at some points, IQ is obviously the objective of that particular assessment but there's so much other stuff that you get out. Doing that assessment really gives you such a wealth of information, some of it good, some of it not so good. So, that's all the good stuff.

CO4.2. clinical tool

CO7.4. wealth of info

I think the bad stuff, for instance, is like when you are doing the processing speed assessment. It relies very heavily on your visual-motor skills and visual-motor dexterity. So if you are dealing with a child that has a grapho-motor problem or a fine motor problem, they are going to score very low but you are not actually checking their processing speed because processing speed is also visual and auditory. So if I give you an instruction, how quickly are you able to process it and respond to it. The fact that you have a visual-motor issue is going to give me a skewed score. Or sometimes, I recently had a child that recently, for most of the IQ assessment looked like a deer in headlights. When I posed a questions she was just like "I don't know what that means, what are you asking me?" and yet when we did the processing speed, she was like… because it was repetitive and their was a direct instruction, she did absolutely amazingly because it was repetitive, routine instruction that she just had to do again and again and again. Or when you need to look at the first symbol or the first two symbols and identify whether its in the next 5, because it's a direct instruction, you don't have to deviate. You do a=b=c. So the problem is then that you get a really high score for processing speed but in the classroom they are unbelievably slow because when a teacher says "open your book, and write your name and then write three sentences about what you did this weekend", because of the motor-dexterity she cant do that. So you get a processing speed score that looks really elevated and then the teacher says "but she's never finishing, she doesn't listen, she doesn't respond, she's not reacting". So ja, I think that that's the thing, there is no perfect test. And then the interesting part comes, when you are doing your report it requires saying, even though this score scored really high it's not an accurate reflection of her processing speed in the classroom unless it is a repetitive test with clear boundaries. So there is no perfect test, so I think that's the thing, being aware all the time that you cant rely on numbers. And I think that's the biggest thing with psychometrics, the numbers only tell half the story. Any IQ assessment is going to give you a number but there's so many things that can affect that number. So even for instance, a crazy thing, when I have a kid come to me and he is completely demotivated and there under duress and doesn't want to do the

CO10 Reliability

CO4. Clinical judgement

CO10 reliability

test, then the scores I get are actually going to be an indication of motivation and not really of aptitude. If I said to him, listen, if you do really well in this test we can play an hour of PlayStation I might get a completely different score. So that's the thing, so I think that's the thing, there is not perfect test and you go to go into the assessment having that mindset of "I'm looking at a much bigger picture. The outcome I'm looking for is and IQ score but the much bigger picture is to see this person holistically. This is not the solution, its part of a solution. An IQ assessment is just part of a puzzle that you're looking at. Like you saw in that CHRIB, there are so many layers that you go to try to constantly look at all of those layers

I: I think that is definitely something that we still struggle with in our initial training is making observations. We are so focused on needing to time, looking where the child is pointing, did I start the timer, we forget to just observe, to look at the client and what they are doing. I think once we are in practice, we will realise that we set the pace and no just power through. Its not necessary, we can just do it at our pace, we can look down to read but we are so focused we forget to observe.

P: It's like when you first learned to drive. You will see, after a few of them you will develop the skills of timing and looking and chatting. It happens, its very normal. You are now just doing something very mechanical that in a short time will become natural.

I: I think it is because we know it is standardised and we know that we cannot deviate at all. So, for example we were talking about it yesterday and we were saying can we say to the child "You're okay, keep going" because the instructions don't say that we can. So, we are very like "is this going to motivate the child incorrectly" but I've seen in my tutoring, often motivation is all they need.

P: So, you are thinking, am I unrealistically motivating this child? Okay, but I may be completely in conflict with what you've been taught. But my feeling is to give the best possible representation of that child, to give him a chance

CO4. Clinical judgement

to really reflect his abilities. I want you to imagine going into an interview, can you imagine your performance? To get the best out of anybody we are going to provide reassurance. So, you can't physically help them but you can say "you're doing well, just keep going" or "there's only ten left". I mean I do say that. So, while there are rules, we are dealing with a living human being, a little guy who maybe didn't sleep the night before or hasn't had his breakfast or had a big fight with his mom in the car. I mean, you have to factor that in, because otherwise your assessment is going to be an indication of that not what he is actually capable of.

CO4. Clinical judgement

I: I think in our training we have such a short time to learn everything we need to, that we learn it right. In my other interview, my participant shared that he had done the full demographic research on the clients, was English home language and in quiet an affluent school, previously model C and she couldn't do the WISC, she just was not achieving and had he continued she wouldn't have achieved so he switched over to the SSAIS and she was able to achieve on the SSAIS. And he told me you have to be ethical, you cannot disadvantage the child. So I agree that ethical mindedness is also really important.

P: Agreed agreed. Especially with children.

I: Something else that came up in my other interviews, the WISC has quite a lot to work with, I mean it is cleared away from the client's view, but to negatives and I don't know if you've possibly experienced them. One was, if a child is already experiencing anxiety with school things, the number of things in rotation the whole time causes greater anxiety. I don't know if you've experienced that?

P: So, I'm never in a situation where a child walks in and we sit down and we do the WISC, I'm never like that. So, the way I structure my assessments is literally the first 45 minutes to an hour we sit in my office, and we have a chit-chat, or to the client it will feel like chit-chatting. So, I have a whole document that I fill out while we're chatting and while we're chatting, I have

a number of things they can play with and fiddle with and talk about. So, by the time we sit down for the WISC we are not in such an anxious state, I also downplay things. Ill say “I’m not sure why this is called a test because its not actually really a test, you’re not going to feel like it’s a test. We are going to do some patterns and pictures and I ask you some really random questions” so I just say to them, its like a real story about nothing. So by the time we sit down at the desk I’m hoping to have cleared all that anxiety. So, whatever I’ve got I keep behind me and I only put what I need in front of me so when they get into the room, they will have the block and the book but that’s all that on the table. Then we will start from there and then I will move things off and put them on as we go. I literally keep it incredibly light because its crazy to put that pressure on the child. But I know that people don’t always have that option. I do a much more holistic assessment.

I: Yes, and I can see how that would be far more beneficial for a client.

P: Another concern that was brough up, I think because of the environment in which my participant worked and also that he is new, only a 2 year registered psychologist now. He found that because there is so much to work with, especially the ADHD kids, it often disorganises him because he’s still trying to move the book and then they’ve got it in their hands, or they try take it or move the blocks. He says that if you aren’t organised then it can completely throw you.

I: I think it has all got to do with experience and I think that he will find over time it will get easier. I sometimes see kids that are literally bounce and when that happens you just need to slow the process down and explain to them that this is how it works and we have to do it in this way and we’re going to turn one page at a time and when we are finished this one, we are going to take a break.

CO4. Clinical judgement

_____disconnected, needed to reconnect_____

254 255	**I**: Okay, we are back, sorry about that! So, we were just talking about ADHD and the child being very busy and how you normally control that situation.	
256 257 258 259 260 261 262 263	**P**: Can I also just say, sorry to interrupt you, the other thing I also do, is if I see that the child is really struggling to focus, and they want to touch everything then I give them something to play with while I'm giving instructions and I then write that in the report. Theoretically what I'm wanting is to see how smart you are and what I'm actually working with and if that means I need to give you something to keep your hands busy then I do it. As long as it doesn't interfere with the process. I think that all comes with experience.	CO4. Clinical judgement
264 265 266 267	**I**: The next two questions basically build on that, so I don't know if you have anything else to add. So, it just says, in your experience what are some of the advantages as well as the disadvantages but I think we've covered quite a bit of those.	
268 269 270 271 272 273 274 275 276 277	**P**: I think the advantages are enormous as long as the test is appropriate to the person you're actually testing. I think the advantages far outweigh the disadvantages but as I said, no test is perfect, and you have to write in your reports "even though this score is elevated/ depressed, this is the situation." The test scores are for diagnostic purposes only in other words they are not going to follow this child around for the rest of their life all they're doing is establishing a baseline for us to check against in two years. Its unfair to say these scores completely represent this child because very often it represents the difficulties that they are experiencing more than anything else.	CO7- Positives CO4. Clinical judgement
278 279 280	**I**: Baring these advantages and disadvantages in mind, to what extent/ degree to you feel the WISC is appropriate for use in the South African context?	
281 282	**P**: Its extremely appropriate depending on the demographics and the exposure, it is completely inappropriate to be used on children whose first	CO3 demographics CO3.4 exposure CO3.2

283	language is not English, it is inappropriate, there is absolutely no question.	
284	The problem is, I don't thing the SSAIS is necessarily appropriate either, so	
285	its like we are to be very weary and state upfront what test we are using.	
	_____Disconnected_____	
286	**I**: Apologies for disconnection again. We were just talking about whether	
287	you think its appropriate and we said that it is appropriate according to	
288	exposure and language and education and its inappropriate if there are	
289	certain aspects related to that.	
290	**P**: To be honest, if you're looking at the South African demographics its	CO3. Demographics (larger SA)
291	probably not appropriate on the large scale. It is appropriate in the Northern	
292	suburbs of Joburg, Cape Town, Pretoria but definitely not appropriate to the	
293	broad spectrum of our population, truth be known.	
294	**I**: On that, in what ways do you feel it could be better adapted to the South	
295	African context.	
296	**P**: I think the biggest thing is obviously language, the way the test is	CO8 Improvements (CO3.2
297	presented, the way that the questions are asked. I definitely think in the	
298	pictures there is not enough diversity, it is not reflective of our population.	
299	For instance, in the arithmetic section all the names, there is one name	
300	maybe, that is an indication of diversity. The other names are all John, Sue,	
301	David and I know that's not the point, but when you're doing a test, you	
302	actually want respondent to feel like they are part of the test, that they don't	
303	feel it is something that does not belong to them. It doesn't have to be every	
304	name. Our problem is that is an English normed test so the chances of there	
305	being a Thabo or anything like that is unlikely. But I think if you recognise	
306	something like that in a test, it feels like it belongs to you and it feels so	
307	much easier to respond to. Kids do come in and feel it's a testing situation	
308	and they should be able to recognise themselves in the test.	
309	**I**: In my research I speak about how, often, race and socio-economic status	
310	is synonymous and how socio-economic status affects exposure, language,	

311 312 313	educational attainment levels those types of things, and even though we are so far into democracy the greater bulk of certain racial groupings are still struggling to get support.
314	**P**: Yes, that is a fact!
315 316	**I:** But that concludes all the questions I require answers from you for, is there anything you would like to add?
317	**P**: No, I think we covered all the bases.
318 319 320	**I**: Thank you so much for you're very valuable input and for taking the time to have this interview, I really did learn form you and appreciate you responses.
321	**P**: Pleasure!
	Interview ended with discussion about internship and supervising (not related to the research topic)

	Interview 3: 60 minutes
	Rapport building discussion held at the start of the interview. Consent obtained to start the audio recording.
	Interviewer: I Participant: P
1 2 3 4 5 6 7 8	**I**: There we go. If you do at some point, sound like the computer's about to take off my computer is very breathy sometimes, it does make noises. Okay, so then there's just some basic demographic information that I need to get first because I do, I did try and get a demographically diverse sample with a limited scope. Because I'm only doing a mini dissertation. It's not a full dissertation. So I tried to get a demographically diverse sample but I never assume anyone's gender anymore or anyone's race or anything like that. What gender do you identify as?
9	**P**: Female
10	**I**: Okay and your race?
11	**P**: Um, tricky one, but let's just go with Indian
12	**I**: And your language group
13	**P**: English
14	**I**: And if you don't mind sharing your age
15	**P**: I'm 31
16	**I**: How many years have you been registered now?
17 18	**P**: Well as a registered counsellor, seven as an educational psychologists just over a year.
19	**I**: Okay, and then just your current setting of employment.

20 21 22	**P**: Okay, so at the moment, I am the selection manager at (foundation name) involved in the (name of fellowship) and basically, I oversee the psychometrics and the selection design for our selection process.	
23	**I**: Okay.	
24	**P**: And then I am in private practice, so I practice in Randburg.	
25 26 27 28 29 30 31 32 33 34	**I**: Perfect. Um, okay, those are just the demographic information. So, the interview was originally structured to be a focus group. But I mean, I had a hard time finding three participants, never mind, eight. So, and just the scope of the mini dissertation, my supervisor and I, later decided that eight, eight is too many. Also, it's extensive. So, a lot of people don't have it, or don't really use it. So, there's only eight questions. I don't think it will take… didn't… sometimes it take a full hour, sometimes not. And a lot of the questions are very similar, but they're just open-ended questions that allow for, you know, discussion about the WISC. So the first question is, how frequently do you utilise the WISC in your practice?	
35 36 37 38 39	**P**: I've used the WISC quite frequently if we if we considering my internship here as well. Because my supervisor had the WISC, and she gave me access to it. So, I needed to do any assessments or accommodations or whatever, the WISC was the first tool I used because it fitted the demographic as well, because in private school	CO3 demographics
40 41	**I**: Okay and you said the demographic was a private school. In which area if you don't mind? Also Ranburg?	
42	**P**: No, it was in Sandton at (schools name) in Sandton.	
43 44 45	**I**: Okay, um, you are the internships have become quite a hassle. At this point, they… places aren't hiring post COVID. They don't want to hire us and if they do it for free, we need to work for free.	

46 47	**P**: Yeah, just keep in touch with me and if I can help you at some point, just, just send me a message if I can, I will.	
48 49	**I**: Okay, thank you! Um, and now currently in private practice, do you use the WISC a lot.	
50 51 52	**P**: So, my private practice is quite slow, because my days are limited as to how much I can use it in private practice. I have used it in private practice. Not a lot, but I am okay.	
53 54 55	**I:** And in in your, you know, as your role as manager in the selection process. Do you administer any of the psychometric media or do you just oversee the process?	
56 57 58	**P**: No. So, I don't administer any psychometric media we have a psychometrist that we consult to externally who does the psychometrics but I obviously am getting trained in all of them so that I can oversee all of them.	
59 60 61	**I**: Okay. So we… also you will find a lot of the questions flow into one another. So often we've answered one as we go along. It just says here, so is there a specific reason… Have you used the SSAIS and the JSAIS as well?	
62	**P**: Yes.	
63	**I**: Do you have a specific preference for one of them?	
64 65	**P**: I don't, I think it depends on the child I'm assessing, and where they from and factors around that.	CO 4 clinical judgement on use based on CO3
66 67 68 69	**I**: Okay. Yeah, because one of my participants prefers the SSAIS, because he works with a lot of children from the townships, whereas my other participants, also in private practice in the northern suburbs of Joburg, so there, the WISC is far more relevant.	
70 71	**P**: So do you want me to expand on that? Do you want to go to the next question?	

I: No, you can expand on that, please.

P: So with regards to that, in terms of affordability, I find that…the WISC is expensive. So even with you are in private practice, you have to rent it right. And then if you're doing a pro bono case, or something like that, for a student in the township, you're going to do the SSAIS because of affordability. But if the parent can afford it from the township or from a public school, that's not too great, you find that you don't want to give the child a test, who's normed so high, and you always want to give the it's always in the best interest of the child. Okay? Right, that's what we do? So, I obviously first look at the results and compare that to where their class is doing or how the school is doing, and then decide from the whether or not the SSAIS will be administered, or should be administered. So the SSAIS of course, shouldn't be administered.

CO1.1 cost of services

CO 4 clinical judgement

I: Okay. Yeah, my research partner is doing SSAIS and I'm doing WISC. And it's quite interesting how they, they play off each other, you know, the SSAIS has its disadvantages in terms of it being very outdated. In terms of the I mean, a lot of the things when you were practicing, I was like, I don't even know this, it's not something within my frame of reference at all anymore. And, you know, I've been very exposed, whereas learners who haven't been exposed at all, to some of the things in the SSAIS, it would be really very difficult for them to complete.

P: Yeah.

I: Yeah. So then, the next question is, What are the demographics in terms of race and language that you typically see with children, either in your practice or previously in your internship? The demographics.

P: Very mixed, I would say really mixed, but at the top would be white. I have to go quite informally, but according to how my memory serves me, it was definitely more white, Indian, black and coloured would be the least.

I: Okay. And it would be…would most of them come from the more affluent schools was all within that school? Correct?

101 102 103	**P**: Yes. It was the more affluent, and obviously, that demographic suits the demographic of the school because that was the demographic of the school it was more why…Yeah, what I explained.	CO3 demographics
104 105	I: All right, and then obviously, that plays well into the choice of using the WISC versus the SSAIS	
106	P: Yes.	
107 108 109	**I**: Okay. Um, so then it says, what are some of the experiences you have had administering the WISC, you know, positive or negative experiences you have had with it?	
110 111 112 113 114 115 116 117 118 119 120	**P**: Sure. So, I think, because I've done the WISC-IV and the WISC-V and I think that in one of the questions, it says, pennies and pence, and obviously, if you are not from England, and these are kids, that kids that have administered it to our children who are exposed to travel, and not all of them would know what a penny is so contextually, I don't think it's relevant in the questioning, or you know, the items that are specifically used. That's the first one of my first experiences. The second experience, I think, is that if I had administered the test to it, sorry, if I administered the SSAIS to the student, a lot of the kids would have come out as gifted, you know, you know, in terms of comparison of the SSAIS and the WISC. So it's definitely that norm that, you know, is questionable as to whether or not it makes sense.	CO3.2 language CO3.4 exposure CO10 reliability
121	**I**: Yes.	
122	**P**: Yeah. So I think those are the two big issues for me.	
123 124 125 126 127 128	**I**: Okay. With some of the things that, so then the next two questions kind of follow on that. It's the advantages and the disadvantages of the WISC and some of the things that have come up. And I don't know if you experienced it like this, is one of my participants said that… So obviously, the WISC, it's quite a few things that you need to have in rotation the whole time is the stimulus book and the blocks, two stimulus books and a response booklet. He's also	

quite new in educational psychology, and he says that very often, if a child is already experiencing anxiety related to assessments and schoolwork, that that amount of stuff often disorientates the child, and they also get anxious. And he says, he often also gets quite, you know, fumbly when the kids get anxious, and he needs to start moving things around. So I don't know if that's maybe been an experience for you.

P: Um, I don't want to reflect that because that wasn't my experience, in a sense that personally, if you are well trained by the WISC, or or you have good enough training, then you know how to administer the WISC. But I can understand that because there was an instance where after a while, I administered it, and you kind of like, you glitchy you know, you like what, what, what was what were you what? You know? But I do think I found my rhythm quickly. So the anxiety could have been his anxiety making the child anxious. But for me, I haven't felt that way. I feel like the WISC, if it is used correctly, is actually quite comforting because it provides the client with an object or picture or you know, something to bring the focus point to the here and now. But I have been, I'll be lying to you, I have been very conscious of the students seeing so many things laid out. Because I, I have thought about the fact that that could make a student anxious, seeing such thick books and those things. The blocks for me, actually, the kids, most kids enjoy the blocks. You know, they look forward to those blocks. I think it's a break from counting in the you know, those traditional kinds of school things you do for learning.

CO4 clinical judgement

CO6 Anxiety

CO7.1&2 Pictures, engaging

CO7.2 engaging

I: Yes. Something else that also just came up was children with ADHD, or not necessarily even diagnosed ADHD but just very fidgety, quite busy. How do you find administration with children like that?

P: Yeah, sure. So that's a good question. With children like that, you do find that you know, they get quite… they get quite unsettled and so what I would do is be very, very clear on breaks like small breaks between every subtest, you know, checking in with a child, are you okay? Do you need water? Do you want to go pick that up? Let's do 10 jumps, you know, something between them to make sure that the child is feeling a little bit settled. I think the issue

CO4 clinical judgment

CO1.2 cost of test

with me for the WISC is the affordability that I need to bring that in again, it is so expensive. And so obviously I do not have the WISC bought for myself. So in my practice I still rent it and if I need to use the five then I pay for it but if I need to use a four there is a psychologist who has been kind enough to be like, you can just use it, you know? And so it's crazy, because you need to, you know, nobody wants to go into debt.

I: Take out a second mortgage for your assessments (laughs)

P: Exactly! But yeah, I think it's just bleh..

I: Yes, it is very expensive because for my research, I emailed Pearson directly, and I was like, you know, I just want pricing. At that stage, I hadn't actually started administering it. So, I didn't really know what all it entailed and what I'd need and whatever. And the full package was R56,000. And I was like, how do people how do we pay for this? Like, we're walking straight into an internship and then straight into wherever and then we don't, we don't have that type of money.

P: Just a bit of context (school name) being such an affluent school, our particular one and hopefully don't use the name in research that they, they didn't buy it, they were like, no ways, we are not going to buy that assessment. It's too expensive. So if it is a tool that is necessity for a school like a public school. How must that be done? There is already lack of funding, lack of resources, because with such an expensive assessment, you'll also find that there isn't a lock up cupboard or a room that you know, a psychologist doesn't have to share with somebody else?

CO1.2 cost of test

I: Yes, yeah. And we so we obviously are looking for internship sites now and we've come into contact with (institution name) and they currently also they only bought two tests, I'm assuming it would probably be WISC and WIAT because it's IEB so it would make sense to have WISC that all the Western Cape and Gauteng schools have to share. There's only one and they need to share. so, it's quite hectic and previously indeed a previously they had to rent

189	it and I'm not sure if it was out of the psychology you know, the interns pocket	
190	or if it was out of you know, for school paid for it, but it's still I mean, I don't	
191	know if Who do you rent from?	
192	**P**: I currently rent from another psychologist	
193	**I**: Okay. Because I think other ones called Mind music. I think that's one of	
194	them. And I normally charge 590 Rand.	
195	**P**: Yeah, yeah. It's and whenever you call mind music, it's never available. Just	CO2 availability
196	so you know. It's always rented out. So yeah,	
197	**I**: yeah, he said he's been on a four week waiting list before…I think we froze	
198	I think it's my internet connection. I've been having some hassles. Can you still	
199	hear me?	
	_____disconnected_____	
	Participant reminded to start recording	
200	**I**: Thank you for reminding me! Yeah, so we were just talking about, you know,	
201	mind music never having the test available and renting it from others. So is	
202	that something that happens quite often within our field is that we rent from	
203	other psychologists.	
204	**P**: Um, I don't know, I just come from class, a Master's class, that was quite	
205	supportive and network-y. And, you know, I don't know if it operates, I'd be	
206	lying to you if it works like that in the broader society of psychologists. But what	
207	I can tell you is that we, whoever we know, like, oh, has it you like this person	
208	has it? Maybe you can rent it from them and tell them I, I recommended you.	
209	So that's kind of how it's done. I think it's also a nice way for psychologists to	
210	cover costs for the purchase of it. Yeah. Oh, while I remember the other issue	CO5.1 IEB wants WISC v
211	with WISC is that IEB clearly stipulates that it wants the WISC. And I'm sure	
212	you heard that from everyone. This will strengthen your data is that the IEB	
213	specifically says it wants the WISC and it wants the WISC-V! Not the WIS-IV.	

I: Oh, really?

P: Yes, if I maybe I'm mistaken, but I'm almost sure that it needs to WISC-V. I remember a student, his name was CJ (pseudonym) and he needed it to go into remedial school, I needed to find the WISC for him to go into the remedial school. And I remember thinking but what because he wasn't part of (schools name). So because of COVID. I was allowed to get it. Remember, I did my internship during COVID. So we didn't have access to people. Right. And so getting assessment done was very difficult process. So I was allowed to then contract through my supervisor who could give us some, some people to assess. Anyway, CJ needed to go to remedial school. And he was just from a regular sorry, let me just catch my thought, public school. And so he needed the WISC and his parents couldn't afford it. So obviously, as a student, I definitely couldn't afford it. So, my supervisor there was like, no, you know, what you administer and provide the assessments, pro bono. So now imagine the desperation of a parent whose child desperately needs to go into a remedial school and they were currently just in a placement school. You know, and they were considering to be keeping his normal school because now, you know, he was getting bullied now, because people started noticing that he wasn't coping and stuff. So the emotional distress or that for the parents just because of an expensive test. It's unfair.

CO1.1&2 cost of service and cost of test

CO9 COVID

I: It is unfair. So my research focuses quite a bit on how, unfortunately, a lot of the time race is synonymous with a certain socio-economic status, and how that socioeconomic status plays into interpretations of intelligence, availability of resources, educational levels, and it is the greater demographic of our country needs these assessments, but they can't afford to have them done. And it's quite sad that that's the case.

P: Yeah, so this little boy was white, and he was Afrikaans. So …but I completely hear what you're saying and how. Yeah. I wonder if you've spoken to anyone who speaks African languages about the interpretation of the words

I: My first participant was an African man. And I chatted to him about it and you just he spoke about you know, he does so… He doesn't often get IEB schools anyway. So he does more commonly administer the SSAIS. And he uses the WAIS-III with his university students. Because it's standardized to our sample, he said, but he has to, like take a lot of time considering language, when he chooses the assessments he needs to do just because he's even, he's had clients where he has done the research their home language, English, you know, they come from a fairly, you know, previously Model C school, etc. And he says, and they still sometimes struggle with the WISC, that ethically he just felt it wasn't fair to administer it any further, he discontinued and switched over to the SSAIS, because it was disadvantaging the child. So, and all of my participants now up till now have said that language is a very big issue with the WISC as well. Not necessarily even just, you know, specific terms, but the way things are said the way they are phrased, is sometimes quite difficult for the South African demographic to understand. It's, it's quite interesting, because when I started this research, I hadn't had experience with the WISC. And obviously, all the research on the WISC-V, you need to pay for still because it's still new, it's not old news. So, you know, didn't have much, I didn't know much. And I was like, oh, yeah, I won't be relevant, because it's normed elsewhere. But when you start working with it, you're like, Okay, I can see the value in this. But also, I've never worked with a real child. So, I can't see how it how it interprets or how it plays out in the actual clinical environment.

P: Yeah, so the WISC is an absolutely amazing tool let's not take away from that, you know, it is a brilliant tool, and most psychologists who have access to it, I know in the North use it. And so it is being used for a very clear reason not only because it is stipulated by the IEB, that you need to use it, but people trust it, more than they trust the SSAIS, because the SSAIS is sorely outdated. Yes. And, yeah, we speak about relevance, as much as I think the WISC is probably more relevant, and contextually than the SSAIS. So as much as the a few gaps for South Africa, with using the WISC, there's a lot of benefit to it, because it works very well with the WIAT. Those two tests basically give you a full scholastic view, you know, apart from emotional and you know, others a

CO7 positive

275	few things that you need to be assessed for. So, you know, it is it is worth it.	
276	And if we think about, you know, the costing of by the psychologist charges for	
277	an assessment, like we cant sit here complaining,	
278	**I**: Yes, for sure. And just on that, because we were talking about it in one of my	
279	other interviews, and we also are like, how do we charge our clients? Like, how	
280	do we know what we charge them? And again, I think it's dependent on the	
281	tests you use, how, you know, if you've bought in, you need to pay back the	
282	mortgage on your house, because you had to, you know, it all depends on that	
283	and whether you're sharing the cost of someone and so it's, it's a lot to	
284	consider, you know, and we didn't really know that we were walking into, you	
285	know, potentially having to buy a lot of assessments.	
286	**P**: So, what that's to the costing we use, we have guidelines from the different	CO1 cost of services
287	medical aids, psychologists use that to charge	
288	**I**: Okay, um, you say that you sometimes use the WISC-IV and sometimes the	
289	WISC-V between those two is there a preference for either one?	
290	**P**: Um, I think the five obviously, just because it is newer and I am trained in	CO7 updated
291	that quite recently, so I'm better versed with that one. The WISC-IV I got	
292	training informally from an ed psych, not by someone who is I don't even know	
293	if you get certified people but you know, when we when we were in Varsity, we	
294	got to train properly for the WISC five. Yeah, so I think that's the only Yeah.	
295	**I**: Okay. All right. And norms wise you feel it's very similar.	
296	**P**: I'd be lying to you. I haven't like in terms of the questions they've asked, yes.	
297	But in terms of looking at the bell curve and the norms and the numbers, I	
298	haven't actually looked at that. So I don't want to comment on that.	
299	**I**: Okay. Let me just write that, because then I can do some research on that.	
300	Yeah, so that I think that speaks to the advantages and the disadvantages that,	
301	you know, we've now highlighted. So, it just says here, bearing these	

advantages and disadvantages in mind, to what extent do you feel that it's appropriate for the South African context?

P: I think it is appropriate. For the context that I've been exposed to it is. I've been able to complete the assessment on all the people that I've administered it on. So I'll be lying, if I saying you can't use it, you can definitely use. And it's given me very clear results in terms of… I've had once, I've had a student to show showed ADHD have had a student with intellectual disability, and the WISC has been able to contribute towards that… Those diagnosis. So is it doing what it's meant to be doing? Absolutely. And so I do think that it is relevant. But just keep in mind that I have been in exposed to a private sector and not only private, but in terms of using the WISC it was private.

CO3 demographics

CO10 reliability

I: So, the final question is just how do you feel? Or, do you feel a could be better adapted for the South African context? And if so, how?

P: Absolutely. So I do think it could be adapted for South African context. Firstly, I think that the way they ask questions could be adapted in terms of just ease of understanding for people, especially because we have so many different languages. I think that in terms of affordability, it could be adapted so that it could access more students and be used by the GDE, by psychologists there. I'm trying to think what else could be adapted. I think, like using terms like pennies and pence, and you know, those kinds of things that are more UK normed in those things need to be adapted. So yeah, I know that you need to go…

CO1 cost

CO3.2

I: No! I live on a main road. So there's always something happening in the road. Someone shouting or clinging on the gate, or there's always something so I was looking what's happening this time. No, okay. But yeah, I think that covers a lot of… so my previous participants. You know, one was very new and one had been, she's been in practice for 12 years. And it's just so interesting to hear how the experiences differ in terms of sort of, like, clients that they see and how that affects how you administer the test and the things you need to consider. You know, if you're working in a setting like (school

name), I don't know, I could be speaking under correction, but like, thinking about the child's language and the isn't as important as it would be, you know, in Pretoria North if you are getting all the, the, you know, the township children even I didn't know this, but there are private schools and townships now, apparently, which I didn't know. And even there he still needed to consider the language, the home language, whether they be able to understand the WISC, but also obviously, a lot of those schools aren't IEB and wouldn't require the WISC. So that allows freedom.

P: So for me, language is not as big of a barrier because most children, most children can speak English more than they can speak their home language. Yes. In in, in private schools, but the difficulty is like if you get a student from China, we have lots of students from China and from India. And so the language barrier is not so much South African context. Its being done in South Africa, but more a thing of accent. How a thing is said.

CO3.2
language

I: Okay. All right. Yeah, I hadn't even considered international students. Which we do have I mean, (schools name) especially, um, I know in Pretoria near my campus we have a (schools name) and we have a (Schools name) and they also like all the embassies are they in Pretoria so they have all the foreign children in (Schools name).

Recording was stopped as conversation about schools and teachers continued, participant was thanked and interview ended.