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CONTEMPORARY ETHICAL CHALLENGES IN INDUSTRIAL PSYCHOLOGICAL TESTING IN SOUTH AFRICA

By

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ii. Abstract

Psychometric testing in South Africa faces many challenges at present. Among these challenges is the fact that many individuals utilising psychometric tests are not professionally registered with the Health Professions Council of South Africa. The key objective of this qualitative study was to gain a better understanding of the contemporary ethical challenges in psychometric testing in South Africa. A total of ten industrial psychologists participated in the study, and content analysis was used to interpret the data. Findings indicated that ethical conduct based on specific ethical values and principles are expected of the testing practitioner within the testing process. An exploratory conceptual framework was produced, which outlines the possible ethical challenges inherent in psychometric testing. The conceptual framework may be applied by industrial psychologists, regulatory bodies, and test-takers during testing engagements. Awareness and understanding of the ethical challenges could inform and promote ethical behaviour in testing practices, as well as encourage testing practitioners to strive for the highest standards of professionalism and ethical excellence. The present project thus aimed to contribute to the continued development of the field of psychometric testing in South Africa. It was envisaged that the information gathered in the process would not only document the most prominent ethical challenges in testing practices, but also form the basis for generating suggestions regarding the agenda that needs to be established to guide and enhance testing practices in South Africa.

Keywords: ethics, psychometric testing, ethical challenge, ethical testing conceptual framework

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Chapter 1: Introduction

1.1   Background to the study

Health care professionals often face ethical challenges relating to aspects such as confidentiality, conflict of interests, disclosing a patient's diagnosis, competence, and objectivity. As a result, many professional codes of conduct have been adopted by regulatory institutions and professional associations across the globe to guide and advise professionals on, amongst others, ethical decision-making. Some regulatory institutions and professional associations that have established such codes of conduct include the American Psychological Association (APA), the Canadian Psychological Association (CPA), and the Health Professions Council of South Africa (HPCSA). Generally, the purpose of such a regulatory and guiding approach is to ensure the professional conduct of these professionals in all the work they do.

Industrial psychology (IP) as an associated health care profession is usually also regulated and guided in such a manner. In South Africa, the IP profession is regulated by the HPCSA, primarily through its Board for Psychology. The HPCSA (and by implication its Board for Psychology in the case of all psychology-related fields) is mandated by South African law to register all health care professionals in South African with the aim to regulate and guide the professions and protect the public. The registration of all industrial psychologists with the HPCSA is compulsory. Furthermore, professional guidance and advice are provided to industrial psychologists in South Africa by the Society for Industrial and Organisational Psychology of South Africa (SIOPSA), a professional association to which many industrial psychologists voluntarily belong. SIOPSA's guidelines, although not mandated by law, also aim to guide industrial psychologists to act professionally (and ethically) in all their professional endeavours across their entire scope of practice.

One important area of work within the scope of practice of industrial psychologists is that of psychometric testing. The British Psychological Society (as cited in Cripps & Spry,

2009) defines psychometric testing as "the use of any procedure on the basis of which inferences are made concerning a person's capacity, propensity or liability to act, react, experience, or to structure or order thought or behaviour in particular ways" (p. 9). According to Bergh (as cited in Schreuder & Coetzee, 2010), psychometrics can be defined as the development and utilisation of various types of assessment instruments with the purpose of measuring, predicting, interpreting, and communicating distinguishing characteristics of individuals. Psychometric test results can be utilised for a variety of work-related purposes, such as selection decisions (hiring, promoting, or placement), enhancing work performance and development (including assisting the individual in career planning and building skills and competencies), and employee counselling.

The nature and practice of psychological testing and psychometrics have always raised heated debate between various stakeholders such as the different regulatory institutions and professional bodies, practising psychometrists and industrial psychologists, and test publishers and test distributors. Within this debate, numerous questions arise: Is psychometric testing fair? Is psychometric testing what it claims to be? Can psychometric testing actually measure what it is supposed to measure? Can true predictions of future performance and behaviour be made on the basis of psychometric testing? What are the ethical challenges in the use of psychometric testing?

These questions are particularly relevant in the South African context, primarily as a result of influences peculiar to the South African society. These influences refer to aspects such as the heterogeneity of communities, many historical race-related issues, and the reality of a combined first and third world economic order. It is against this background that it is often believed that the field of psychometric testing could affect the citizens of South Africa more than any other branch of psychology, and that psychometric testing could play a crucial role in transforming the discipline of psychology in South Africa (Sehlapelo &

Terre'Blanche, 1996). Psychometric tests are popularly deemed to be scientific, thereby

contributing to the objective and professional practice of judgement in a society often

accused of subjectivity and prejudice in its assessment of others (Foxcroft & Roodt, 2001).

In the above context, it is understandable that possible ethical challenges in

psychometric testing have arisen. If psychometric testing were to play such an important role

in South Africa in future, what are the contemporary ethical challenges experienced by the

actual stakeholders such as test users, test distributers, users of psychometric testing

technology, companies utilising psychometric tests, professional regulatory and advisory

bodies, psychometrists, industrial psychologists, and all other independent interest groups?

The importance of this question is clear when it becomes apparent that the use of

psychometric testing is apparently on the increase (Edenborough, 2005). It is against this

background that a pertinent problem can be identified.

1.2   Problem statement

Despite the increasing usage of psychometric testing and the vastness of questions

relating thereto, there seems to have been a steady decline in academic publications in this

field. In a certain sense, it is believed that psychometric testing is the victim of its own

success. In this regard, Owen (1998) states that, despite the enormous advances made in

psychometric tests since the beginning of the 20th century, their phenomenal growth in

number, variety, functions, and increased usage in decision-making has brought these tests

under attack and scrutiny. Many questions remain unanswered and a number of new

questions have arisen, for example: Is psychometric testing indeed fair towards everyone and

are contemporary developments, such as online testing, inherently ethical?

Regardless of the declining scholarly interest in psychometric testing, the practice thereof has continued to grow (Edenborough, 2005). This growth can probably be attributed to the tests' perceived value in many areas of application. According to Owen and Taljaard (as cited in Van der Merwe, 2002), it appears that psychometric tests can, for example, contribute to the efficiency of selection and placement in industry, if used carefully and responsibly. Friedenberg (as cited in Van der Merwe, 2002) refers to research that compared different selection procedures (application forms, letters of reference, interviews, and testing), and states that, although each technique has its own merits, standardised tests are the most psychometrically sound.

Furthermore, Nell (1994, p. 105) pragmatically contends that "psychological assessment is so deeply rooted in the global education and personnel selection systems, and in the administration of civil and criminal justice, that South African parents, teachers, employers, work seekers and lawyers will continue to demand detailed psychological assessments." In addition, Plug (1996) is of the opinion that "the need for tests in our multi-cultural country is greater than elsewhere because valid assessment is a necessary condition for equity and the efficient management of personal development" (p.3). Psychometric tools have arguably proven themselves to be up to the task, from predicting academic achievement to predicting performance.

Psychometric testing is a dynamic field, with new tests and assessment instruments being developed on a continuous basis, and new social expectations regarding fair and ethical testing practices being formed. Technological advances have further changed the landscape of psychometric testing from traditional paper-and-pencil tests to online testing. In addition, contemporary Africa is infinitely unique, and advances in psychometric testing made internationally are not necessarily applicable in this diverse context. Despite the vast amount of information available on generic ethical issues in psychometric testing, such as

confidentiality, privacy, and objectivity, the amount of information specifically addressing the contemporary ethical challenges in psychometric testing in South Africa is limited. Given then the many remaining questions regarding psychometric testing against a background of increased usage, it was believed that more research could add to the scientific body of knowledge in this field. One issue that seemed to need more attention refers to the possible ethical challenges related to psychometric testing specifically in the South African context.

1.3   Objective of the study

This study, therefore, intended to answer the following research question:

What are the contemporary ethical challenges in psychometric testing in South Africa?

The study was contextualised in South Africa to accommodate the many variables unique to the South Africa scenario – major societal differences, such as the eleven official languages and the variety of cultures. It was intended to obtain the insights from actual stakeholders in the field of psychometric testing such as test users, test distributors, and test publishers. It was believed that by integrating these insights into the existing body of knowledge, a better understanding of the challenges and possible solutions could be derived.

The objective of this exploratory study was to search for enhanced insights into the following specific questions: (1) What are the ethical challenges related to the field of psychometric testing in South Africa from the perspectives of different stakeholders, and (2) what possible recommendations regarding ways to ensure ethics in psychometric testing can be proposed?

1.4   Possible contribution of the study

It is believed that the findings of the study could contribute in the following ways: (1) Enhance the knowledge base regarding possible contemporary ethical challenges in psychometric testing in South Africa, (2) provide greater clarity and understanding to specific stakeholders regarding the nature and scope of possible ethical challenges in their specific domain of practice, (3) contribute towards addressing these ethical challenges by searching for possible solutions, and (4) explore the possible need to develop a new set of ethical guidelines to govern the use of psychometric tests in South Africa specifically.

1.5   Summary

Chapter 1 provided the background to the study and presented a specific question: What are the contemporary ethical challenges in psychometric testing in South Africa? In the following chapters, this question is explored, firstly, through a literature study to establish the relevant theoretical knowledge domain and, secondly, through interpreting the results of an empirical study intended to gain insights and understanding from various stakeholders currently working within the field of psychometric testing in South Africa. Recommendations following from the study are proposed, and a critical reflection is included to delineate possible limitations to the study.
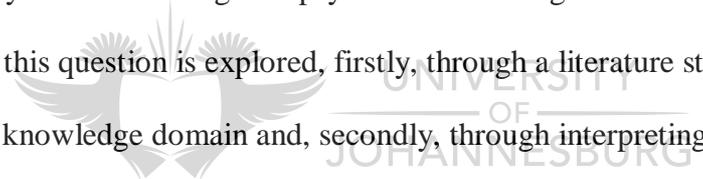
Chapter 2: Literature Review

What are the contemporary ethical challenges in psychometric testing in South Africa? To provide a theoretical basis for an inquiry into this question, an overview will be provided of the following: (1) ethics as a concept, (2) psychometric testing and the conceptual difference between testing and assessment, (3) known ethical challenges in psychometric testing, (5) specific contemporary ethical challenges in psychometric testing in South Africa, and (6) existing guidelines to enhance ethics in psychometric testing in South Africa.

2.1 Ethics as a concept

In the search to find a suitable definition of ethics, it became clear that some philosophers use the terms "morality" and "ethics" interchangeably, but that many philosophers do make a distinction between these two concepts (Pojman, 1994). The first school of thought includes researchers such as Adelman (1991) and Brugger and Baker (1972), who perceive morality and ethics as two distinct concepts. For example, Adelman (1991, p. 665) differentiates between the two concepts as follows: "Morality deals with principles of right and wrong conduct. Character traits such as honesty, integrity, etc. are moral qualities to be developed in accordance with principles of right conduct. Ethics is more concerned with standards of conduct acceptable to a group, a profession, or members of an organisation."

The second school of thought, characterised by authors such as Rossouw (1994), Reese (1980), and Hoffman and Frederick (1995), does not distinguish between the two concepts. These authors use the two terms interchangeably and argue that, etymologically, the Latin word for "moral" corresponds to the Greek word for "ethical" (Lacey, 1976, p. 138).

Gouws, Louw, Meyer, and Plug (1979) describe ethics as the opinions of what is perceived to be correct and incorrect in a specific situation or for a specific group, and

morality as the quality of behaviour that deals with the degree to which it is correct or incorrect according to the opinion of the specific group. In another attempt to define ethics, De George (1999, p. 20) contends that, in its most general sense, ethics is a systematic attempt to make sense of our individual and social moral experience in such a way as to determine the rules that ought to govern human conduct, the values worth pursuing, and the character traits deserving of development.

Rossouw and Van Vuuren (2010) emphasise the element of ethics that deals with the interaction between people when they explain that ethics is concerned with studying what is good and right in human interaction. In these authors' opinion, ethics is centred around three basic concepts, namely the good, the self, and the other. According to Craig (as cited in Carruth & Carruth, 1991, p. 170), the concept of ethics requires one to think about and reflect upon such issues as morals, values, various ways of life, and the reason for adopting certain values. It also requires the ability to question certain traditions and even proffer suggestions for change.

According to Wiley (1995, p. 22), the concept of ethics refers to a system of conduct based on moral obligation that indicates how we should behave, our acceptance of responsibility, and social justice. It also includes the commitment to do what is right. The authors of the BESA Survey (2002) provide the following definition of ethics: "Ethics is the practice of aligning human life, either individually or collectively, or institutional structures and practices, according to basic standards of conduct." Human conduct, practices, and institutions are judged good or bad, right or wrong, in the light of such standards of conduct. Standards of conduct take on the form of values/principles, obligations, rights, and consequences, and meeting those standards emanates from good character or virtues.

For the purpose of this study, the definition of Rossouw (2002, p. 3) that "Ethics concerns itself with what is good or right in human interaction," was used as a working
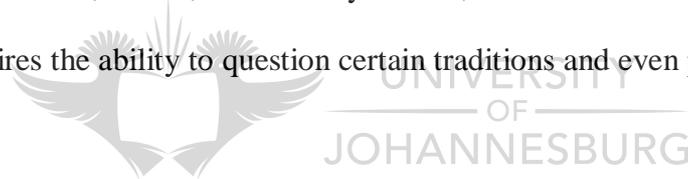
definition of ethics. The researcher was of the opinion that this simplified yet holistic definition would provide an inclusive framework for this study. Furthermore, in the context of the current study, a conceptual distinction between testing and assessment was required, which is discussed in the next section.

2.2   The conceptual difference between testing and assessment

The concepts *psychometric testing* and *assessment* are theoretically distinct. Although these terms are often used interchangeably, they do not refer to exactly the same thing. According to Fernandez-Ballesteros (2002), the most important difference between testing and assessment concerns the simplicity or complexity of the methods used. In this regard, testing is included in assessment; however, assessment is not necessarily limited to testing. Moreover, testing and assessment differ in terms of the required attributes of the individual applying the instruments (Paterson & Uys, 2005). In current usage, assessment refers to the entire process involved in collecting information about individuals and using it to make important predictions or draw inferences. It therefore follows that tests represent only one source of information collected in the assessment process.

For the purpose of this study, Schreuder and Coetzee's (2010, p. 3) definition of psychometric testing: "Psychometric testing refers to the development and utilisation of various types of assessment instruments to measure, predict, interpret, and communicate distinguishing characteristics of individuals for a variety of work-related purposes," was adopted as a working definition. It is important to note, however, that psychometric testing, as mentioned earlier, is only one of the key elements of the much broader evaluative process known as psychological assessment (Foxcroft & Roodt, 2001). The current study focuses on the limited domain of psychometric testing.

Within the scope of the practice of industrial psychology, psychometric tests are commonly employed as a means to aid organisations in occupational decisions, including the selection and classification of human resources (Van der Merwe, 2002). According to Anastasi and Urbina (1997), there is scarcely a type of job for which some kind of psychometric test has not proved helpful. The authors state that psychometric testing has proved to be of value in many organisational matters, such as selection, hiring, job assignment, transfer, promotion, and termination. The use of such tests is often legally regulated to protect the public against abuse. In this regard, the ethical aspects of psychometric testing obviously have relevance.

2.3 Ethics in psychometric testing

Ethics lies at the core of virtually every discipline or profession, but is considered of high importance for relatively few (Iliescu, Ispas & Harris, 2009). Since "ethics is at the core of every discipline" (UDEPP, 2008, p. 2), the nature and components of ethics in all professions should be explored and emphasised. According to Oakland (2005), a statement of ethics is a statement of the social responsibility of a profession that, at the same time, implies a statement of the personal responsibility of those who practise that profession (Oakland, 2005).

Ethics in testing or, in a broader sense, in psychological work, usually provides explicit norms of correct behaviour. Most national associations of psychology have explicit ethical standards by which their members must abide. According to Rossouw and Van Vuuren (2010), all professionals and, by implication, their professional organisations, have a "relatively unique set of stakeholders whose ethical expectations have to be gauged and satisfied" (p. 225). Therefore, in order for industrial psychologists to be effective in their professional role, it is important that they are aware of their ethical obligations and their

stakeholders' expectations in this regard. These ethical obligations and expectations are commonly outlined in a profession's code of ethics, and the industrial psychology profession is no different.

In South Africa, this code of ethics exists in the form of a regulation that provides industrial psychologists with guidelines and standards for ethical conduct and is enforced by the HPCSA. This code is, however, of a generic nature, and, as such, provides an ethical framework for all branches of psychology. Despite the apparent comprehensiveness of these guidelines, a need was still perceived to revisit the inherent ethical challenges in psychometric testing, since ethics is comprised of intricate and sensitive topics within the psychometric testing arena.

2.4   Ethical issues in psychometric testing

The potential for misuse of psychometric testing has existed for some time (Ben-Porath & Butcher, 1986, as cited in Watkins & Campbell, 2000). This misuse often involves unqualified test users, i.e., individuals lacking the necessary training and experience in psychometric testing (Goodyear & Sinnett, 1984, as cited in Watkins & Campbell, 2000), and unsophisticated test users, i.e. individuals who have general training in testing but lack background in a specific test (Zachary & Pope, 1984, as cited in Watkins & Campbell, 2000). Psychometric tests are an integral part of psychological work and are associated with significant legal and ethical responsibilities for those conducting the testing process. Because of the potential impact of testing on the lives of job applicants and current members of the workforce, the ethical implications can be profound (Kimmel, 2007).

In considering the ethical issues involved in psychometric testing, Domino and Domino (2006) are of the opinion that three areas are of paramount importance: informed consent, confidentiality, and privacy. According to these authors, informed consent means that the

subject has been given the relevant information about the testing situation and, based on that information, consents to being tested. This is a theoretical standard that in practice requires careful and thoughtful consideration. The issue of confidentiality is, according to Domino and Domino (2006), perhaps more complex. Test results are typically considered "privileged communication" that should be shared only with appropriate parties. The question then arises: What is appropriate? Should the client, be it the test-taker or the organisation, have access to the actual test results elucidated in a test report? In this regard, Domino and Domino (2006) remind us that only the client and the professional should have access to test results, and that any transmission of test results to a third party requires written consent on the part of the client. According to Hersen (2004), the limits of confidentiality should be discussed prior to any assessment or testing, and feedback about test results should be presented to the respondent in a manner that the person can understand and that minimises the potential for harm.

The right to privacy basically concerns the willingness of a person to share personal information with others. In many tests, especially personality tests, the subject is asked to share what may be very personal information, occasionally without realising that such sharing is taking place. Mention might also be made of feedback, as well as providing and explaining test results to the client. Pope (1982, as cited in Domino & Domino, 2006) suggests that feedback may the most neglected part of testing and assessment, and describes feedback as a dynamic and interactive process, rather than a passive information-giving process. Furthermore, if one considers tests as tools to be used by professionals trained in their use, it becomes quite understandable why tests should not be readily available to unqualified users. In this regard, Hersen (2004) states that users of tests must have appropriate training in the purpose, administration, format, scoring, and interpretation of the specific test.
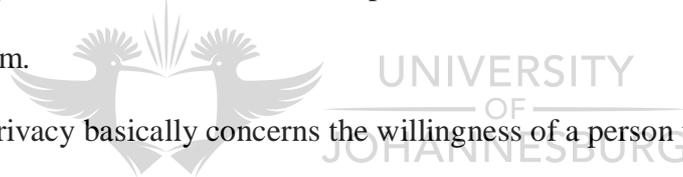
According to Hersen (2004), it is the test user who is obliged to select the most appropriate instrument for a given application. In this regard, Hersen (2004) asserts that test users are obliged to understand the purpose of testing, its probable consequences, and the necessary procedures to ensure effectiveness and reduce test biases. Furthermore, test users should understand the psychometric properties of the test, the normative data for the test, and the nature and impact of measurement error (Hersen, 2004). Test users should also remain alert to the ethical issues that arise specifically regarding computer-generated reports, which are primarily used in assessment settings (Hersen, 2004).

According to Hersen (2004), the trend of using computers to generate reports presents a clear advantage to the testing practitioner in terms of time management; however, one ethical concern is that the decision rules used by the computer to generate the report are sometimes not explicitly stated. Another concern is that, given the ease of utilising computers to generate reports, it can be tempting to substitute such interpretations for comprehensive, integrated reports (Hersen, 2004). This substitution is a clear violation of ethical standards, and is likely to result in a disservice to the testing client. Specifically, Standard 9.01 of the "Ethical Principles of Psychologists and Code of Conduct" (American Psychological Association, 2002) requires practitioners to integrate additional available evidence into their overall evaluation – a dimension totally neglected in computer-generated reports. Another ethical challenge is the availability of interpretive programs to individuals lacking the proper professional qualifications to administer tests and interpret the results. Concerns such as this contributed to the publication of ethical guidelines that specifically address the use of computer-assisted testing (American Psychological Association, 2002).

In summary, it is clear that the concern for ethical behaviour is a pervasive aspect of the psychology profession and that the broader practising fraternity, client organisations, and the public at large are often not aware of. This may be particularly relevant in the South African

context, where problems such as multiculturalism and diversity present practitioners with new and different ethical challenges within the field of psychometric testing.

2.5   Specific contemporary ethical challenges in psychometric testing in South Africa

As Africa is a continent of great contrasts, any attempt to present African issues in a collective way runs the risk of failure. Keeping this in mind, this section will map out the core ethical challenges related to psychometric testing that are prominent in South African literature.

The South African social landscape is infinitely unique and constantly changing, and testing in South Africa cannot be separated from the country's political, economic, and social history (Claassen, 1997). Testing in South Africa developed within several distinct time periods, often with different foci. At the beginning of the twentieth century, South Africa was a British colony, and testing finds its roots in this colonial heritage. Psychometric testing in South Africa followed the same developmental patterns as in Europe and the United States; however, the cultural context in which tests were first developed was an environment characterized by unequal distribution of resources based on racial categories. Therefore, according to Foxcroft and Roodt (2005), the development of testing almost inevitably reflected the racially segregated society in which it evolved.

Testing was brought to Africa in the colonial era, and is therefore not indigenous to Africa and its people (Foxcroft, 2002). Efforts to adapt tests to suit the local social landscape were not made until much later (Foxcroft, 2002). Many of the influential figures in the development of tests in South Africa were trained at American institutions. According to Foxcroft and Roodt (2001), this resulted in the use of American tests within the very different employment environment that is characteristic of South Africa. Furthermore, psychological knowledge was used as a tool to legitimise a social order based on race, as the perception was

that psychological testing produced empirical data that supported certain justifications of this order, i.e. the differential performance of individuals on testing reinforced the idea of a human hierarchy in human society in South Africa. This was further used to justify differential treatment in terms of education and employment (Foxcroft, 1997).

Given the unique and complex South African environment, challenges in the field of psychological assessment and the development of psychological tests are ever-present (Claassen, 1997; Foxcroft, 1997; Owen, 1998). All psychometric tests are not necessarily fair to people from different cultures, different socio-economic or educational backgrounds in the selection process. In addition, the negative perceptions that prevail regarding assessments in South Africa have been exacerbated by complexities of multiculturalism and multilingualism (Pelser, Bergh & Visser, 2005). The major criticism revolves around the issue of cultural bias. According to Jensen (1980), this cultural bias may result in unfair discrimination against racial and ethnic groups or even people of low socio-economic status (Jensen, 1980). Therefore, equitable and fair test usage requires a focus on the cross-cultural applicability of tests. Considerations in this regard include whether common or separate psychometric instruments for different population groups should be used, due to South Africa's vast diversity (Pelser et al., 2005). When candidates for the same job have not completed the same psychometric test(s), the selection decision becomes very complex (Owen, 1991). The testing practitioner needs to be sensitive to test-takers' cultural backgrounds and values during the test selection, administration, interpretation, and reporting phases of the testing process (Foxcroft, 2002).

From this analysis it is reasonable to acknowledge that cultural variables do exist and every attempt should be made to understand the effects of culture when using psychological tests and assessments for all candidates (Cuellar, 1998). The core ethical consideration

facing those who conduct psychological testing in the culturally and linguistically diverse South Africa relates to how best to cater for the diversity of the South African society (Foxcroft, 2002). In this regard, Korman (1973) asserts that:

The provision of professional services to persons of culturally diverse backgrounds by persons not competent in understanding and providing professional services to such groups shall be considered unethical; it shall be equally unethical to deny such persons professional services because the present staff is inadequately prepared; it shall be the obligation of all service agencies to employ competent persons or to provide continuing education for the present staff to meet the service needs of the culturally diverse population it serves (p. 18).

Another challenge facing practitioners conducting psychometric testing in South Africa is that of language and test translation (Foxcroft, 2002). From an ethical perspective, test-takers have the right to be assessed and tested in the language of their choice. However, according to Foxcroft (2002), to be able to allow test-takers to exercise this right presents the testing practitioner with a number of challenges. When attempting to translate test instructions and verbal test items into the language of choice of test-takers, one common difficulty encountered is finding bilingual experts to undertake the translation and to judge its accuracy (Foxcroft, 2002). The translator needs to understand the idiosyncrasies and subtle nuances of both languages, as well as the social meanings attached to words and phrases.

Another common difficulty that arises during test translation, according to Foxcroft (2002), is that equivalent indigenous terms or words cannot always be found in the language into which the instructions and verbal items are being translated. In the interest of ethical testing practices, the testing practitioner should gain information about both the test-takers' home language and the language of instruction used during schooling before deciding which language would be appropriate to use during testing or whether bilingual testing would be most appropriate (Foxcroft, 2002).

Consequently, a challenge facing those involved in psychological training and continuing professional education in South Africa is seeking ways of developing assessment practitioners and researchers with a current, multicultural awareness and worldview (Foxcroft, 2002). A suggestion in this regard is that practitioners from indigenous backgrounds should be included in training programs as they would bring a unique, culturally-relevant perspective to the practice of psychological testing.

A further consideration is that many international tests are imported and used in South Africa. These tests are sometimes unsuitable for use in contemporary Africa and its array of cultural groups. There is thus, according to Foxcroft (2002), a need to study the validity, reliability, and cross-cultural bias of these tests in the South African context, and subsequently adapt such tests for local use here. Another ethical challenge within the psychometric testing arena within South Africa is the fact that numerous existing tests are not appropriately aligned with the levels of the National Qualifications Framework (NQF) (Foxcroft, 2002). Such alignment needs to take place, both in terms of norm groups used, as well as what type or level of qualification a test-taker needs to have attained to be able to complete a certain psychometric test.

A further ethical challenge, according to Foxcroft (2002), is that the ordinary man in the street does not have an understanding of the content, purpose, and nature of psychometric testing. This may further alienate people from testing and its potential benefits. To aggravate matters, many tests used are outdated and irrelevant in the new democratic South Africa and the changing world of work, and applying these could lead to misuse.

Besides the abovementioned issues, rapid technological advances and the changing business environment also bring challenges in terms of psychometric test use. Over the last decade we have, for instance, seen a dramatic increase in the popularity of online testing. It has the advantage of reducing testing time and testing higher volumes of test-takers at the

same time, but it reduces the practitioner's level of control over the testing environment and as Foxcroft (2002) warns, the computer-generated reports should be viewed with caution sine it does not carry the clinical perspective of a trained psychologist.

Issues may also arise when psychometric tests are used in high-stake selection contexts, if tests are inappropriately applied, or when tests are used in isolation without verifying the results against other measures (Foxcroft, 2002). In this way, psychometric tests can act as a gate-keeper. However, recently, there has been a renewed appreciation for the contribution that these instruments can make in terms of fair and equitable decision making, providing that the tests comply with legislative requirements (Van der Merwe, 2002). Nonetheless, the use of a number of tests that have not been properly validated for use in selection decisions within a multicultural context is still rife.

It is fair to conclude that the problems in establishing and ensuring equity in psychometric testing have not been adequately solved in modern South Africa, despite recent legislation, regulations imposed by regulatory bodies, and an increased focus on the topic. In South Africa, the Health Professions Act (Act No. 56 of 1974) led to the establishment of the HPCSA. The Board for Psychology thus also serves to regulate the ethical challenges faced by professionals within the field of psychology.

2.6   HPCSA guidelines for ethical psychometric testing

The HPCSA came into being in 1974 (Raubenheimer, 1982) with the purpose to ensure that professionals registered with the HPCSA deliver quality care to clients and patients. The Psychometrics Committee, which forms part of the Professional Board for Psychology, has the duty of classifying and revising South African-developed as well as imported assessment methods used to evaluate emotional, behavioural, and cognitive processes. The Health

Professions Act emphasises professionalism, democracy, transparency, equity, and accessibility (Mauer, 2000).

The HPCSA's rules of ethical conduct cover many generic ethical problems within the field of psychology, such as confidentiality, disclosing information to clients, competency-based ethical dilemmas, and the prevention of unfair discrimination. Section 5 of the HPCSA's ethical guidelines specifically addresses assessment and, in particular, assessment in a professional manner, appropriate use of assessment methods, assessment in a professional context, informed consent, test development, cultural diversity, communication of results, interpretation and explanation of information for professional test users, interpreting results, explaining results, test scoring and implementation, releasing of test data, outdated tests and test results, and test security.

With regards to government legislation, numerous Acts have been promulgated with the aim of enhancing ethical practices in testing and assessment. In the period prior to the new Government of National Unity in 1994, the development of tests was shaped by the Apartheid political dispensation (Foxcroft, 1997). The period since South Africa's first democratic election in 1994 has seen the application, control, and development of testing measures becoming contested terrain (Foxcroft & Roodt, 2005). Nzimande (1995), an influential politician, expressed the following opinion:

"The context within which testing is going to take place in South Africa has completely changed. South Africa is shifting from being an Apartheid society to a society that is predominantly concerned with addressing and meeting the basic needs of the majority of the people in the country. Testing in South Africa developed within the context of national, racial and gender oppression. No matter how much psychologists might have thought they were practicing their 'science' of testing by observing the ethics of this profession, the fact of

the matter is that this was not possible in a society that could be characterized as 'unethical' (p.5)".

With the adoption of the new Constitution and the Labour Relations Act (LRA) in 1996, trade unions and individuals were finally awarded the support of legislation that specifically forbids any discriminatory practices in the workplace, which includes the protection of applicants in that they have all the rights of current employees in this regard. The second Act of importance in this context is the Employment Equity Act (1998) (EEA). The passing of this act led to much confusion in the Industrial/Organisational Psychology community regarding the use of psychometric tests. The act clearly states that the use of tests is prohibited, unless the user can show that the tests being used are valid, reliable, and fair. The confusion was exacerbated by the lack of familiarity with the code of ethics that governs psychometric testing.

Paterson and Uys (2005) are of the opinion that legislation such as the EEA accentuates the importance of appropriate psychometric properties of psychological tests, as well as the significance of ensuring validity and equity in assessment. Kriek (1998) is also in favour of this legislation, stating that it can only improve current assessment practices in South Africa. Legislations such as the EEA and the LRA also strictly control the classification, possession, control, and use of psychological tests and other devices and instruments used for assessing individuals.

2.7 Summary

If the history of South Africa is viewed in terms of increasing racial dividedness, the present-day South Africa can be seen as the culmination of a journey through significant obstacles and dealing with tremendous diversity towards the creation of a single nation. Legislation in the form of the Employment Equity Act, which stipulates that no psychological test that is biased against any cultural group can be used in South Africa, has transformed the

use of psychometric tests in South Africa. The new legislation poses challenges to psychologists who make use of these devices in their practices or organisations.

In addition, the field of psychometric testing in South Africa faces many challenges at present. Foremost amongst the challenges is that culturally appropriate tests that meet stringent psychometric standards are needed for all cultural and age groups in our diverse society if testing practitioners are to succeed in employing fair testing practices. Linked to this is the challenge of having various language versions of tests so that test-takers in the multilingual South African society can be assessed in the language in which they are most proficient. This poses logistical challenges to the test developer.

The current research study attempted to broaden understanding of the contemporary ethical challenges in psychometric testing in South Africa. The main question to be answered in this study is: What are the contemporary ethical challenges in psychometric testing in South Africa? In this chapter, the researcher explored ethical challenges prominent in the field of psychometric testing, both in South Africa as well as internationally, through a literature study in order to establish a relevant theoretical knowledge domain. Chapter 3 presents the empirical study used to investigate specific contemporary ethical challenges in psychometric testing in South Africa. Through the interpretation of results, it was intended to obtain insight and understanding from actual stakeholders working within the field of psychometric testing.

Chapter 3: Research Method

3.1 Introduction

The main objective of this study was to investigate the contemporary ethical challenges in psychometric testing in South Africa, as experienced by different stakeholders in the field. The research methodology as described in this chapter was determined by the objective of the study, as discussed in Chapter 1. Chapter 2 dealt with the theoretical foundation of the research subject. The relevant concepts were explored, either individually or in relation with one another. These concepts were the following: ethics, ethics in psychometric testing, and psychometric testing in South Africa. A wide range of salient ethical challenges in psychometric testing were identified, including, but not limited to, confidentiality, objectivity, conflict of interest, feedback of results, informed consent, and the right to privacy. The empirical component of this study was intended to verify existing findings and to add insight into the contemporary ethical challenges in a country as diverse as South Africa.

In Chapter 3 the contemporary ethical challenges in psychometric testing in South Africa is discussed and investigated by means of an empirical study. Firstly, the research design will be discussed, followed by the research strategy. Thereafter, the means by which the data were gathered will be explored. The research setting, research participants, and the procedure followed will be dealt with. The researcher will then provide an overview of the data analysis procedure, where after strategies to ensure quality research and ethical considerations will be discussed. The chapter will conclude with a brief summary, after which the results of the study will be presented in Chapter 4.

3.2   Research design

A research design that would permit the identification of the contemporary ethical challenges in psychometric testing in South Africa, as experienced by various stakeholders, was adopted. Figure 1 below provides an overview of the different aspects of the chosen design.

Figure 1

The Research design process
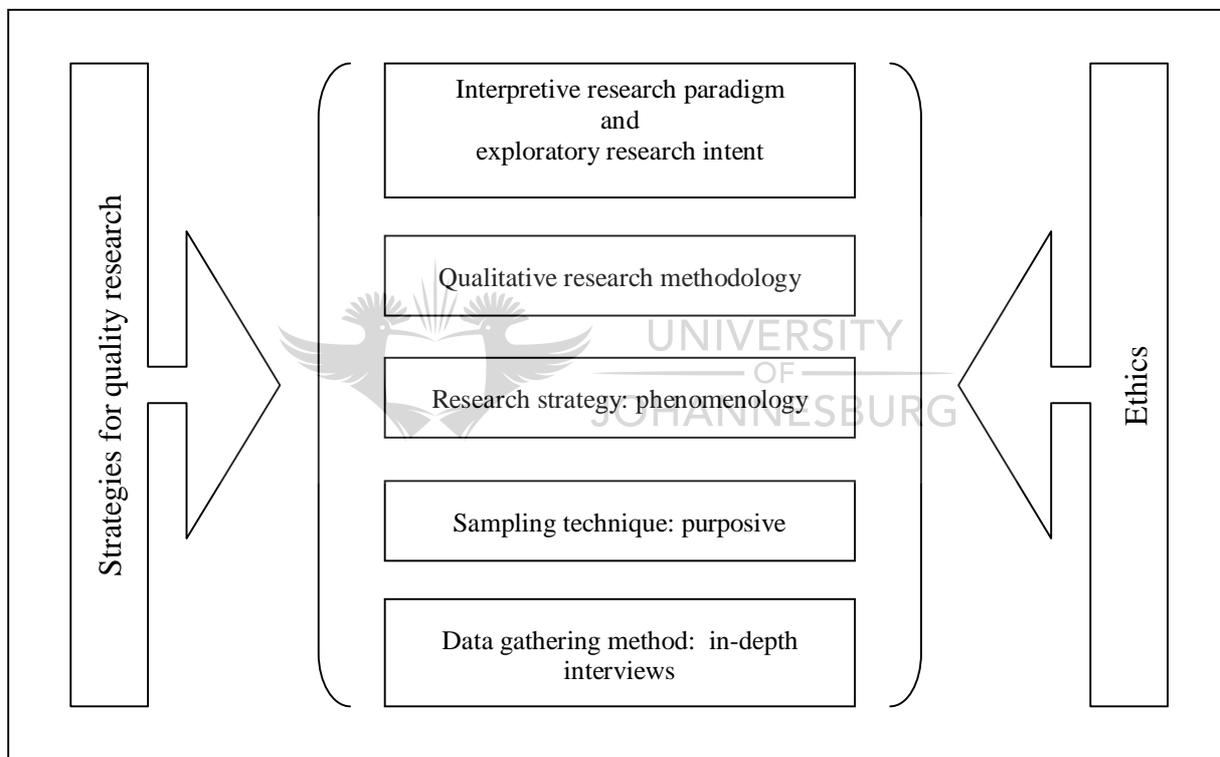
3.3   Research paradigm

An interpretive paradigm underpinned the study, as it acknowledges the internal and subjective nature of participants' reality (Bergh & Theron, 2006). As researcher, I identify with this approach because I believe that an interpretive approach should form the foundation of social research techniques because these are, according to Neumann (2000), sensitive to context (such as the workplace), use various methods (such as one-on-one interviews) to

understand how others view the world, and are more concerned with achieving an empathetic understanding of feelings and world views than with testing laws of human behaviour. The scientific assumptions of this paradigm are provided in Table 1.

Table 1

Scientific Assumptions of the Interpretive Paradigm

Interpretive Paradigm		
Ontology	Nature of reality	Reality as we know it is constructed intersubjectively through the meanings and understandings developed socially and experientially (adapted from Guba & Lincoln, 1994).
Epistemology	Theory of knowing	Assumes that we cannot separate ourselves from what we know. The investigator and the object of investigation are linked such that who we are and how we understand the world are central to how we understand ourselves, others, and the world (adapted from Guba & Lincoln, 1994).

3.4   Research method

A qualitative research method was deemed most applicable as it is generally used to answer questions regarding the complex nature of phenomena with the purpose of describing and understanding the phenomena from the participant's point of view (Leedy & Ormrod, 2010). In the current study, a qualitative research approach allowed for corroboration whereby it could be ensured that the research findings accurately reflected people's perceptions, whatever they may were, as described by Merriam (1991).

3.5   Phenomenological research strategy

Research strategies within the qualitative method that may be applied to research include grounded theory, ethnography, case study research, and phenomenology, to name a few. Phenomenology was employed for the purpose of this study as it is "a qualitative method that attempts to understand participants' perspectives and views of social realities"

(Leedy & Ormrod, 2010, p. 108). Since phenomenology is an interpretive approach that addresses social phenomena from the point of view of the people involved (Walker, 2007), it allowed the inclusion of participants' views of the ethical challenges they encounter when involved in psychometric testing. According to Walker (2007) and Welman, Kruger, and Mitchell (2005), phenomenology is a strategy used to gain a better understanding of human beings' perceptions, opinions, judgements, attitudes and, most importantly, their experiences of and perceived meanings attached to specific events. According to Welman et al., "what the researcher observes is not the reality as such, but an interpreted reality" (2005, p. 191).

3.6 Data gathering

Several methods can be used to collect data, such as focus groups, interviews, observations, case studies, the Delphi technique, and others. For the purpose of this study, in-depth interviews were chosen to collect data. In 1956, Benny and Hughes identified interviewing as the most common method of data collection used by researchers to inform them about social life. Four decades later, this is still the case. Interviewing can thus be regarded as the primary mode of systematic enquiry (Warren & Karner, 2005).

Many benefits exist in using interviews to gather data. By employing this method of data collection, the researcher is guaranteed a 100% response rate as well as the quality of flexibility (Gravetter & Forzano, 2006). Interviews further offer value in that they allow the researcher to understand themes of the lived daily world from the subject's own perspective (Kavale, 1996). The interview further enables the researcher to obtain an "insider view" of the social phenomenon and explore other avenues of research emerging from the interview (Schurink & Schurink, 2011). Another important advantage is that socially and personally sensitive topics such as ethics can be more openly discussed (Schurink & Schurink, 2011).

Interviews do, however, have the disadvantages of being time-consuming and posing the risk of interviewer bias (Schurink & Schurink, 2011). Furthermore, Schurink and Schurink (2011) are of the opinion that the vast amount of data collected makes ordering and interpretation thereof difficult. Despite the possible disadvantages, the use of interviews as a means of data gathering was regarded as the most suitable for the current study for the following reasons: (1) ethics constitutes a complex issue and flexibility was deemed important within the process of data collection, (2) ethics may constitute a personal or socially sensitive topic and, as such, lived experiences are required, which can be obtained through interviewing, and (3) a discussion on ethics has the possibility of eliciting personal dialogue, which is best suited to interviewing.

Risks related to time constraints and possible bias were countered by strictly adhering to standardised procedures as well as engaging in effective time management. Risks related to the difficulty of interpreting results and findings were countered by coding and transcribing the data through a process of systematic content analysis. Ten in-depth interviews were conducted with purposively selected participants on a one-on-one, face-to-face basis during July 2011. All interviews were recorded with an audio device and transcribed verbatim thereafter. The questions posed to the participants as indicated in Table 2, were as follows:

Table 2

Interview schedule

Main question	Clarifying question	Probing question
What are the contemporary ethical challenges in psychometric testing?	1. How would you broadly define the term 'ethics'?	• What underlying values do you believe underpin the term 'ethics' as you have just described it? • What does ethics in psychometric testing mean to you? • What do we need to do to act ethically when we are involved in psychometric testing? • How may we fail to act ethically when we are involved in psychometric testing? • Where and when do we fail to act ethically when we are involved in psychometric testing?
	2. What was possibly the greatest ethical challenge that you have ever experienced personally?	• What made the challenge so daunting? • What underlying ethical values were most at stake? • What could have prevented this challenge from arising? • How did you go about addressing the challenge? • Did you seek help from others? • From whom did you seek help? • And you views on the matter, in retrospect?

	3. So, in summary then: What is possibly the greatest ethical challenge in psychometric testing currently?	• What makes this challenge so daunting? • What underlying ethical values are most at stake? • What can prevent this challenge from arising? • What should be done to address this challenge? • Who should provide help in addressing this issue?
	4. You also mentioned the challenge of....	• What makes this challenge so daunting? • What underlying ethical values are most at stake? • What can prevent this challenge from arising? • What should be done to address this challenge? • Who should provide help in addressing this issue?
	5. Any other challenges, apart from the above, that you would like to highlight?	
	6. A concluding statement from you side, perhaps?	

3.7   Data analysis

Within the qualitative method, "data analysis is based on the values and meanings that the participants perceive for their world" (Ivankova, Creswell, & Plano Clark, 2007, p. 14). In order to best capture the participants' perception of the contemporary ethical challenges in psychometric testing, content analysis was used. "Content analysis is perhaps the fastest-growing technique in qualitative research", and is defined as "the systematic, objective, quantitative analysis of message characteristics" (Neuendorf, 2002, p. 1). Content analysis

refers to analysing data in detail, and examining and interpreting data in an effort to summarise participants' responses. This, in turn, allows for the identification of key themes and/or patterns from the participants' feedback. As such, it allowed for rich and relevant answers to emanate from clients' perceptions of the contemporary ethical challenges in psychometric testing in South Africa.

Subsequent to the interviews being transcribed, I embarked on a process of immersion into the data to fully familiarise myself with the content. This enabled me to engage in a process of systematic content analysis. Through a first-level analysis, detailed codes were identified that were then, through a second-level analysis, consolidated into broader themes. These themes were then interpreted and integrated into a framework of understanding that accommodated all the themes at a higher level of conceptual understanding. This framework was then subjected to one peer reviewer, and final adjustments were made to the framework before I presented it by means of a comprehensive discussion.

3.8   Research setting, entrée, and role of the researcher

The research setting was the current psychometric testing field in South Africa, primarily within the context of organisations that regularly utilise testing. Possible participants were identified through referrals from my supervisors at the University of Johannesburg's Department of Industrial Psychology and People Management. I gained access to the possible participants through my supervisors, and approached them in a formal and well-structured way.

An electronic invitation was sent to the identified participants, informing them that the study was part of a Master's research module with the focus on the contemporary ethical challenges in psychometric testing. The purpose of the study was fully explained and it was made clear that participation was voluntary and confidential, and that participants would

remain anonymous. Participants were also informed that the research process would entail a face-to-face interview lasting about one hour, which would be recorded with an audio device.

I clarified my own role: (1) to conduct the interviews, (2) gather and analyse the data, (3) identify any key findings and draw conclusions from these, (4) formulate recommendations for specific stakeholder groups, and (5) suggest future research. Interviews were arranged at venues and times that best suited the participants, and all interviews took place in a mutually respectful and co-operative manner.

3.9   Participants

Qualitative research practice requires that the data collected should be rich in description of people and places (Roodt & Fouche, 2004). Therefore, purposive sampling was employed as a sampling strategy as it allowed for the selection of participants that could clarify and deepen the understanding of the research topic, as proposed by Kerlinger and Lee (2000) and Silverman (2000). As suggested by Neumann (2000) and Silverman (2000), sampling was achieved through a critical and deliberate thought process to ensure the selection and inclusion of participants that were unique, especially informative, and specialised in terms of the population. This sampling strategy was deemed appropriate for this study as it ensured that only participants who had been extensively exposed to psychometric testing (and the possible ethical challenges related to this practice) participated in the study.

Participants were selected on the basis of the following criteria: (1) They had to have been registered as industrial psychologists for a period of more than eight years and possess a minimum of eight years' relevant experience within the field of psychometric testing, 2) they had to have a minimum of five years' market exposure in terms of distributing psychometric tests, and 3) they had to belong to a relevant interest group and possess sufficient knowledge regarding the field of research. Participants across different industrial psychology subfields,

genders, and organisations were selected for the research study. The criteria for participation are presented in Table 3. Table 4 reflects descriptive information pertaining to the participants.

Table 3

Criteria for selection of participants

Stakeholder Group	Criteria for Selection	Number of Participants
Individual test users	• Registered industrial psychologists for a minimum period of 8 years • Minimum of 8 years' experience in the use of psychometric tests for purposes of selection or development	4
Organisations using psychometric tests	• Executive Human Resources Managers and/or in-house industrial psychologists with more than 8 years' experience in the use of psychometric testing for purposes of selection or development	4
Test distributors	• Distribution of a wide range of psychometric test material (local and international) to a wide range of clients • Market exposure of at least 5 years	1 Senior representative from 2 test distributors
Individual test user	• Registered Industrial Psychologists for a period of more than 8 years • Minimum of 8 years' experience in the use of psychometric tests for purposes of selection or development	One peer reviewer
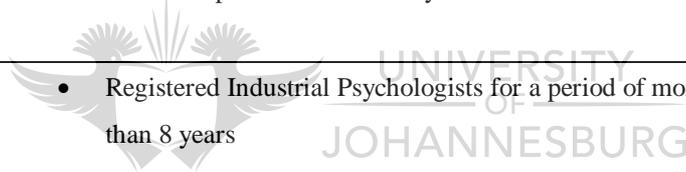
Table 4

Description of participants

Participant	HPCSA Classification Category	Age Range	Gender	Race	Number of Years Involved with Psychometric Testing
1	I/O Psychology	41-50	Male	White	20 years
2	I/O Psychology	51-60	Male	White	15 years
3	I/O Psychology	51-60	Male	White	30 years
4	I/O Psychology	51-60	Male	White	15 years
5	I/O Psychology	41-50	Male	White	15 years
6	I/O Psychology	41-50	Male	White	17 years
7	I/O Psychology	41-50	Female	White	15 years
8	I/O Psychology	41-50	Female	White	16 years
9	I/O Psychology	51-60	Female	White	20 years
10	I/O Psychology	31-40	Female	White	8 years
11 (peer reviewer)	I/O Psychology	51-60	Male	White	30 years

Of the research sample, 77% were men and 33% were women. Unfortunately, no I/O practitioners of colour were nominated for inclusion in the study.

3.10 Quality assurance

A number of criteria are accepted to judge the quality of qualitative research. These are briefly summarised in Table 5.

Table 5

Strategies to ensure quality research

Quality assurance	Description	Strategies to ensure that criteria are met
Replicability	Study can be replicated (Golafshani, 2003)	Reflexivity, keeping record of the process in which the research took place, and clearly stating the process of the research (Seale, 1999).
Credibility	Ability to conceptualise the topic (Schwartzel, 2008)	Parameters of the setting, population, and theoretical framework are defined (De Vos, Strydom, Fouche & Delport, 2005).
Transferability	Application of findings to another context (Schwartzel, 2008)	Field notes and documentation on how the research took place (De Vos et al., 2005).
Dependability	Should elicit similar findings if the study is replicated with the same sample (Schwartzel, 2008)	Reconstruction of the social world (De Vos et al., 2005) and accounting for subjectivity and context (Schwartzel, 2008).
Confirmability	Study can be confirmed by another (Schwartzel, 2008)	Researcher should ensure that the data confirm the general findings (De Vos et al., 2005; Schwartzel, 2008). Acknowledge existing theory (Schwartzel, 2008).
Triangulation	Using multiple sources of data to produce understanding (Mays & Pope, 2000)	Acknowledge investigator bias (Shenton, 2004). Peer debriefing (Shenton, 2004). Using multiple theoretical perspectives (Shenton, 2004)

In order to optimise the quality of the study and ensure trustworthiness of the findings, strategies to enhance the reliability, credibility, transferability, dependability, and confirmability of the study were applied, as recommended by Matthews and Ross (2010). Research integrity and credibility, as well as corroboration were also ensured. The reliability of a content analysis study refers to (1) its stability, or the tendency of coders to consistently re-code the same data in the same way over a period of time, (2) reproducibility, or the tendency of a group of coders to classify category membership in the same way, and (3) accuracy, or the extent to which the classification of a text corresponds to a statistical

standard or norm. This was achieved through the peer review process, whereby the verbatim interview notes and first-order themes were confirmed to be stable, reproducible, and accurate.

Credibility refers to the degree of trustworthiness of a particular study and the presentation of accurate conclusions based on the data (Durrheim & Wassenaar, 2002). In the current research study, credibility was ensured through verbatim transcripts of the individual interviews, and the fact that I attempted to block out all previously acquired knowledge and preconceptions surrounding and pertaining to this study. Peer consultation was another strategy which I applied to enhance the credibility of this study. Regular discussions were held with peers who have a broad and in-depth understanding of the topic of the study. They were required to listen to ideas and concerns about the study, and asked to provide the necessary feedback and guidance.

Transferability contributes to the trustworthiness of a study, as it assesses whether the conclusions of the study can be transferred to another context or setting, or a wider population, and still yield similar findings (Durrheim & Wassenaar, 2002; Schwartzel, 2008). A comprehensive and detailed description of the research process is available to other researchers to follow. Furthermore, the fact that purposeful sampling was used, in its own right ensured some transferability, albeit limited, as such a sampling technique renders a sample that is representative of the population under study.

Establishing dependability in a study ensures that if the study is repeated with similar participants in a similar context, the findings would be similar, and are thus replicable (Babbie & Mouton, 2001). In order to meet this requirement of dependability in the current study, participants were selected from referrals by credible industrial psychologists. This ensured that the participants selected were in a position to share their opinion on the ethical challenges in psychometric testing in South Africa, based on past dealings and experiences.

The detailed documentation of the research process enables future researchers to follow and reconstruct the process through which I reached my conclusions.

Confirmability is established when the audience for whom the research is intended is able to assess the adequacy of the research process and judge whether the findings emanated directly from the data (Goosen, 2004). In this study, confirmability was ensured through a detailed description of the research process, thereby enabling the audience to judge the methodological and theoretical decisions of the study. Research integrity was ensured by having a great volume of detailed written notes, as this enabled me to verify information (Neumann, 2000). Consistency and reliability of data analysis were ensured through systematic written documentation of the analysis. Further, I gathered detailed verbatim descriptions of the evidence as well as notes, including references to the sources.

The purpose of corroboration is not to confirm whether people's perceptions are accurate or true reflections of a situation, but rather to ensure that the research findings accurately reflect people's perceptions (Stainback & Stainback, 1988). One process involved in corroboration is triangulation. To ensure triangulation of *measures*, I presented the conceptual framework of the interpreted findings to one peer reviewer who was then prompted to either accept or reject the findings and framework, or to suggest adaptations to the latter. To ensure triangulation of *theory*, I utilised multiple theoretical perspectives from leading researchers in the fields of psychometric testing. Empirical data were reported where it was available.

3.11   Ethical considerations

When human participants are involved in a study, certain ethical issues need to be considered and included. This will ensure that participants' dignity and rights are protected, that all procedures are fair, and that information and responses are safeguarded (Flick, 2009). Accounting for ethical issues also results in improved quality of data (Walker, 2007). The ethical issues that were considered in this study included: voluntary participation, confidentiality, informed consent, anonymity, fairness, respect, and prevention of and protection from any harm (Flick, 2009). Furthermore, all sources used for the purposes of this study were acknowledged.

In terms of the ethical issues that were addressed, participation was voluntary, as the participants contacted were given the option of whether to participate or not. Informed consent to disclose results was obtained from all the participants in the study. Anonymity and confidentiality were guaranteed in that no names of participants or their employing organisations would appear in any published literature. In addition, to ensure the ethical principle of anonymity, I did not attach names to the data, but used numbers instead.

In terms of informed consent, the participants were informed at the start of the process that their responses would only be used for the research purposes explained. They were not deceived in any way concerning the research aims, and were informed from the outset of the goals of the research. The participants were not subjected to risk or personal harm, and respect was practised throughout the process. Every procedure, method, and process used was explained in a cover letter beforehand. Furthermore, the participants were informed that, once the study was complete, they would receive a copy of the completed research paper.
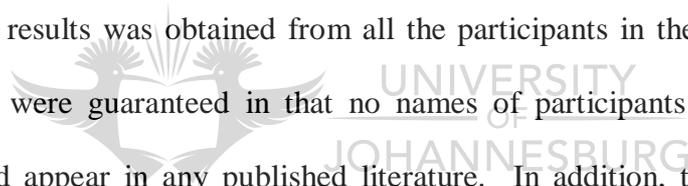
3.12 Summary

In this chapter, the research design and method used to gather the necessary information pertaining to this research study were discussed and explained. An attempt was made to describe the facets of this research process in detail, and justification was presented for the preferences shown in this study. The next chapter will deal with the results of the transcribed interviews.

Chapter 4: Results

4.1   Introduction

The objective of this study, as formulated in Chapter 1, was to establish an informed understanding of the contemporary ethical challenges in psychometric testing in South Africa. An initial literature review was undertaken to gain an understanding of the relationship between ethics and psychometric testing. To answer the following research question: *What are the contemporary ethical challenges in psychometric testing in South Africa?* an exploratory qualitative research design was employed to gain insights from industrial psychologists involved in psychometric testing. The chosen research methodology was comprehensively discussed in Chapter 3, and the most important findings from the study are reported in this chapter.

4.2   Codes identified through a first-level content analysis

The captured data from the 10 interviews were analysed and subsequently interpreted. Key-phrases-in-text were utilised as the units of analysis and categories. Codes were assigned to the data during the process of analysis, from which more abstract categories could be derived, as proposed by Hussey and Hussey (1997). To achieve this, each line of data in each of the ten interviews was analysed. In total, 40 979 words were analysed. The comments were then grouped according to themes, and each was assigned an axial code. The grouping process was repeated several times, and refined each time. A system of allocating different colours to different sets of data allowed cross-referencing to individual responses at any time, and eventually facilitated the formation of a matrix that contained the various categories and the individual responses in each category. At various stages, the categories were discussed in detail with my research supervisor, further assisting in the process of refining and the description of categories.

A total of 56 codes were identified through a first-level content analysis. These codes are depicted in Table 6 below. For clarification purposes, each theme is described. The frequency of each theme is depicted under the hash symbol in the column headings. This frequency stipulates the number of times a specific code was mentioned by participants during the interviews. Direct quotes from the interviews are also included in the table (next to the correlating code) for purposes of clarification and aiding understanding.

Table 6

First Order Themes

Code	Description of Code	#	Quotes for the Interview
Lack of professional registration	Registration with the HPCSA is a pre-requisite for professional practice, and is also a legal requirement.	64	"... people need to be properly qualified, registered, have a proper internship and things like that - proper training, so that means people must be equipped to do some psychological testing." (P2)
Misuse of psychometrics	Using psychometrics for purposes other than for what it is intended.	46	"Other ethical dilemmas in huge corporations is the misuse of psychometrics or the intended misuse thereof for purposes to disposition certain employees due to poor performance ..." (P8)
Improper test administration	This relates to practical considerations such as improper lighting and inadequate instructions to test-takers.	46	"There's a lot of other things, I mean contemporary ethical challenges in psychometric testing obviously the administration of the test...there is very clear guidelines from, I think, the Health Professions Council on how to do psychometric testing, how to administrate psychometric testing. You know, the venue must have enough light and, you know, enough air and so forth, but the instructions, the reading of the manual before the time. So, there are guidelines with regards to that." (P3)
Move toward online testing	This signifies the move away from traditional methods of testing toward computerised-based testing.	40	"There is a move toward online testing and this is not something we can just ignore. It is making a huge impact on all stakeholders. Sometimes positive, sometimes negative." (P8)

Lack of fairness	Lack of fairness implies that every test-taker does not have the opportunity to prepare for the test and is not adequately informed about the general nature and content of the test, as is appropriate to the purpose of the test.	31	"Fairness relates to the process and how the individual is treated in that process, so it's procedural fairness and it's fairness in the way the decisions are made based on results, and so on. So, I think fairness is a key value. I think the question often becomes: "Fair to whom?" because what seems fair to the organisation might be unfair to the individual. But it's fair in the broader sense". (P6)
Monetary incentive	Unfair compensation; charging unfair and unreasonable fees for one's services.	31	"... There is always a monetary incentive that goes along with testing, and people are misusing this in terms of enriching themselves by using unethical tests." (P9)
Inadequate supervision	Poor control in certain testing conditions, such as online testing.	29	"The issue is not online or internet-based testing, the issue is unsupervised testing, because online is just a platform. I can do it on the pc in my office and still have it online." (P6)
Inappropriate use of assessment results	Using results for the wrong or unethical purposes	26	"When we're using psychometric tests for inappropriate applications, we are not acting ethically." (P4)
Lack of confidentiality	Lack of security measures in place to protect against disclosure of information to parties other than the intended recipient.	24	"I think, from an ethical perspective, confidentiality in testing seems to be a challenge." (P3)
Test-takers' experiences	Test-takers' past experiences of assessment.	21	"We also have to take into the account the test-takers feelings and the fact that they may have been hurt in the past in terms of testing." (P6)
Lack of integrity	Not displaying and maintaining high standards of moral character and behaviour.	19	"Ok, for me, in ethics, it's all to do with integrity and truth." (P8)
Not following best practice guidelines	Neglecting to ensure that psychological assessments are conducted appropriately, professionally, and ethically.	19	"I think we need to make sure that we stick to the best practice guidelines around how we engage with participants in an assessment process." (P6)
Inadequate expertise	Having insufficient knowledge of testing and how tests are utilised.	18	"Well, I think the issue is that you need to have a certain knowledge base in terms of where you need to comply with certain criteria." (P2)
Unclear and unethical intentions	Not using test results for the intended purpose.	16	"The one risk for us, always, is how those results are used, and we are very careful as consultants, especially how the results are used." (P6)

Lack of training and qualifications	Not being properly trained in certain tests and not possessing the necessary qualifications to conduct testing.	15	"Well, first of all, I think one should be properly trained and qualified to work with these tests." (P2)
Westernised way of testing	Recognising that testing is not indigenous to Africa and its people, and being cognisant of the fact that taking a test is not always within the everyday experience of African people.	14	"We take the Western academic background and Western work philosophies and Western way of developing people. I think that's sort of the majority view in psychological assessment. I think we don't always question those grey areas in terms of the constructs that we're measuring and how applicable they are and how fair and ethical it is to use them, as (is) when you're testing in multi-cultural, multi-lingual contexts." (P9)
Off-the-shelf tests	Utilising tests that have not been properly researched and validated.	14	"They also make use of a lot of off-the-shelf tests and psychometrics which haven't been researched properly and ... they will just use that and the information that goes through to the client is then totally unreliable and maybe, in some cases, even not valid, and that can harm people to an extent." (P1)
Amount of control over the process relating to the purpose of assessment	This relates to the test administrator possessing more or less control over the testing process.	14	"One, you have a lot of control, but, two, the control of the process sits at the back end of the process." (P6)
Not doing the right thing	This refers to not displaying moral behaviour in one's actions and not acting in the best interests of others.	13	"I think, in the simplest term[s] it is probably doing the right thing. So, I think that's, in my view, for both our client and also the person being assessed just to make sure you actually do the right thing." (P5)
Not complying to basic ethical criteria and guidelines	Not complying with basic ethical guidelines such as gaining informed consent and maintaining confidentiality.	13	"Well, I think the issue is that you need to have a certain knowledge base in terms of where you need to comply with certain ethical criteria and guidelines." (P2)
Meeting the quota	The numerical requirements for hiring, promoting, admitting, and/or graduating members of a particular racial group at the cost of others.	11	"We, like I say, in my environment, it is the effect that politics play on the workplace nowadays, where you have to deliver equity, where you have to deliver a percentage of African people into the specialist positions." (P2)
Going beyond scope of practice	Performing certain activities in which IP's are not trained and for which they are not registered.	10	"... It's when you start getting out of your scope of practice in the sense that you're starting to make sort of real clinical judgements based on occupational tools. That, I think, is a real dangerous space where people go." (P6)
Inadequate test registration	Failing to register all psychometric tests with the professional board.	9	"Then we also have tests that are not being regulated at all, and not registered at the Health Professions Council." (P1)

Not displaying professionalism	Failing to demonstrate expert and specialised knowledge in the field which one is practicing professionally.	9	"I think professionalism would be one of the values underlying ethics." (P6)
Inadequate test classification	Not classifying tests with the professional board.	8	"The ethical challenge is about classification and registration. I'll probably get into trouble for saying this, but it's got to do with how the board actually conduct that at the moment. There's a requirement that your assessments have to be registered or classified with the board if they are going to be used in South Africa." (P10)
Inadequate test regulation	Not properly regulating tests.	7	"... The lack of a system that is in place that can regulate the practices in South Africa, because, currently, we have all sorts of test developers running around with different sort[s] of classification of their test and we don't have a uniform system that actually regulates this practice very well. Then, we also have tests that are not being regulated at all, and not registered at the Health Professions Council. So, I think, the biggest thing is to get our testing practices sorted out in terms of regulating testing." (P1)
Improper questioning	The inability to examine by questioning formally or officially.	7	"I think knowing what you're talking about in terms of a contemporary context, you have to interrogate things. I think that one of the problems we have in South Africa is that we do not scientifically interrogate issues as practitioners." (P3)
Lack of open communication between all stakeholders	No and/or incorrect communication between stakeholders involved in testing.	7	"I think to ensure that we act ethical, we need constant communication and conversations about the issues." (P5)
Unclear contracting	Not establishing the necessary parameters / scope of work with potential clients.	7	"I think contracting is fundamental to good ethics". (P6)
Using whatever tools are available	Using tests that have not been properly researched.	7	"When people use what's in their toolbox as opposed to what should be required. And, sometimes, they do it because they simply don't have access to appropriate things." (P7)
Conflict of interests	Occurs when an individual or organisation is involved in multiple interests, one of which could possibly corrupt the motivation for an act in the other.	6	"Conflict of interest[s] is another issue in the ethical domain of psychometric testing." (P8)

Not exercising good judgement	The inability to make the best decision possible on the basis of an objective assessment of known information.	6	"For me there are, fundamentally, two things that drive ethics. The one is integrity and the other one is exercising good judgement." (P5)
Lack of honesty	Not being truthful, straightforward, or sincere in terms of intentions or motivations.	6	"Honesty would be a value, I think, one could link to ethics." (P7)
Not educating stakeholders and clients	Being the cause of a lack of education and knowledge among stakeholders and clients.	5	"I think it is an education of your client organisations and people that are using psychometrics as their education around: 'What are the standards and requirements for us as psychometrists and psychologists." (P2)
Not utilising appropriate instruments for the South African context	Not taking into account the diverse context within which testing takes place in SA.	5	"I think the challenge in South Africa is to get and use appropriate instruments, considering our population and culture and language groups." (P9)
Lack of compassion and kindness	Demonstrating no love and respect for others irrespective of their beliefs, gender, race, religion, or nationality; and not extending goodwill, care, and consideration to all beings.	5	"So, I think looking with kindness and compassion on whoever is involved and, especially, from the receiving end, those who are being tested." (P1)
Not displaying non-maleficence	Not complying with the basic ethical principle of doing no harm.	5	"Well, for me, ethics mean to do no harm, first of all." (P2)
Flaky research	Unreliable and non-scientific research.	5	"I also think there's a lot of stuff where the research is very flaky. And the people selling the tests are not sufficiently scientists to ask the right questions and make sure that the tools they use are robust and fit for purpose." (P6)
Inadequate safeguarding of tests and test material	Failing to keep all test material and results in a safe storage space.	5	"There is also the issue of keeping tests and test materials safe and secure." (P9)
Immorality	Failing to display morality in all actions.	5	"It's all about being moral in what you do." (P7)
Continuous professional development (CPD)	Refers to professionals studying in order to upgrade their knowledge and skills in their professions.	4	"I think there is some prestige to having a professional registration, for people to continuously develop themselves and remain in contact with what's happening in the field. I think that's important for the professional side of your ongoing development." (P3)
Unclear role of Board and professional bodies	This challenge refers to the need for professional bodies to be viewed as ethical in what they do, and to ensure that their role is clear to all stakeholders.	4	"...and to have an ethical body that's work is viewed ethically because, at this stage, the Health Professions Council is not being taken serious for what they are doing in terms of regulating testing." (P10)

Multi-cultural, multi-lingual environment	Applicability in diverse SA context	3	"There are a lot of ethical issues, ethical challenges when you work cross-culturally. Some test-takers may have difficulty expressing themselves on these tests. I can't tell you what we are supposed to do about this, but this is definitely a concern for me." (P7)
Credibility	Refers to the subjective and objective components of the believability of a source or a message.	3	"They're looking to ... give some credibility to what they do. So they put tests out there that appear credible, but they aren't." (P5)
Not displaying dignity	Not demonstrating respect and ethical treatment.	3	"Well, I think the underlying values for me are in terms of openness and treating people with dignity." (P10)
End-user considerations	Not taking into consideration the possibility of	3	"There is also, of course, the end user side of it, and I think that is an aspect of the ethical side that is not always explored or discussed, and that is: what the end users do with the information that they get." (P6)
Improper interpretation and feedback of results	Not interpreting results correctly, and giving improper feedback to test takers.	3	"I think there are a lot of challenges involved in the interpretation and feedback of results. I think, sometimes, people who interpret the results and provide clients with feedback don't always do so in a proper and ethical manner." (P4)
Lack of alignment with international standards	Not aligning our test practices to international guidelines and standards.	3	"But I do think that, in terms of the bigger lessons that we need to align ourselves more with international practices." (P6)
Transparency	Implies openness, communication, and accountability.	3	"Well, I think, the underlying values [are] ... openness and treating people with dignity, and the issue of being transparent ... in your practices." (P10)
Lack of humility	Not displaying modesty.	2	"Well, underlying ethics, underlying values: ... respect, definitely, integrity, definitely, humility - for me humility is the willingness to be known for who you are ... I think those three, and truth." (P8)
Incompetence	Not having acquired the skills and abilities at a level of expertise sufficient to be able to perform in an appropriate work setting.	2	" ... with competence as a value, in the sense that you always ensure that you do the right thing, that you work accurately, and that you do proper research before you do your testing." (P1)
Generated reports	This refers to online testing where the reports are computer-generated.	2	"... online assessments have these expert-generated reports that takes no cognisance whatsoever of the context and the purpose of the assessment." (P7)
Inability to make sound decisions	Inability to make objective and correct decisions.	2	"It is the way decisions are made around psychometric assessment results. It's over- or under-interpretation by client organisations. I suppose that would be the biggest risk I need to manage mostly." (P4)

4.3 Themes identified through a second-level analysis

The 56 codes that were identified through the first-level content analysis were subsequently grouped together on the basis of similarity or shared meaning. Eight themes were identified during this process: 1) professional context, 2) human interface / ethical values, 3) technical interface, 4) South African context, 5) regulatory context, 6) individual context, 7) technological context, and 8) organizational context. These themes are depicted and described in Table 7. The frequency with which each of the supporting codes featured is also indicated.

Table 7

Second-Order Themes

Supporting codes	Theme	Frequency
1. Professional context		**206**
Registration with professional board	*This refers to the standards of practice that guide the conduct of the professional during psychometric testing so as to ensure the necessary qualities and values. This context also specifically focuses on the rules and guidelines set for the industrial psychology profession.*	64
Best practice guidelines		19
Inadequate expertise		18
Unclear and unethical intentions		16
Training and qualification		15
Compliance with basic ethical criteria and guidelines		13
Sound knowledge base		9
Expertise in field		9
Professionalism		9
Clear contracting		7
Exercising good judgment		6
Conflict of interest		6
Continuous Professional Development		4
Scope of practice		4
Credibility		3
Making sound decisions		2
Competence		2

2. Human interface / Ethical values		**117**
Fairness	*Values can be defined as the core beliefs and attitudes one displays in terms of what is good or desirable (Kenyon, 1999; Smith et al., 2003). Certain values are fundamental in promoting the goals of the industrial psychology profession, and offer practicing psychologists guidelines for ethical and professional conduct.*	31
Confidentiality		24
Integrity		19
Doing the right thing		13
Honesty		6
Compassion and kindness		5
Non-maleficence		5
Morality		5
Dignity		3
Transparency		3
Humility		2
Goodness		1
3. Technical Interface		**191**
Misuse of psychometrics	*This refers to the technical aspects involved in the testing process such as scoring, reliable and valid research, and test administration.*	46
Test administration		42
Inadequate supervision		29
Using results inappropriately		26
Off-the-shelf tests		14
Amount of control over testing process		14
Using whatever tools are available		7
Flaky research		5
Safeguarding tests and test materials		5
Proper constructs in tests		3
4. South African Context		**34**
Western way of testing	*This context highlights the unique and diverse background against which testing takes place, as well as the need to ensure that testing practices are appropriate for this context.*	14
Multi-cultural, multi-lingual environment		12
Utilising appropriate instruments for context		5
Alignment with international standards		3
5. Regulatory Context		**47**
Test registration	*This context highlights broader regulations, legislation, and governance-related requirements.*	9
Test classification		8
Test regulation		7
Open communication among stakeholders		7
Appropriate questioning among stakeholders		7
Educating stakeholders		5
Role of Board and professional bodies		4

6. Individual Context		24
Test-takers' experiences	*This context applies to the test-taker and his/ her personal values and expectations involved in the testing process.*	21
End-user considerations		3
7. Technological Context		42
Online testing	*This refers to the commercialisation of the testing world, including computerised tests, report feedback, and interpretation.*	40
Computer-generated reports		2
8. Organisational Context		45
Monetary incentive	*This aspect relates to the broader organisational environment in which testing is conducted and in which associated practices are used.*	31
Meeting the quota		11
Interpretation and feedback of results		3

Outstanding features of each of the seven broad themes are discussed in detail below.

4.3.1 Professional context

Aspects relating to the theme *professional context* occurred 210 times during the interviews. The supporting code with the highest frequency overall (64) related to the need for registration with the HPCSA:

> *"You need to be registered with the Health Professions Council if you are to involve yourself with psychometric tests and assessment" (P2).*

Best practice guidelines had a frequency of 19, and the importance of this aspect can be derived from the following comment:

> *"I think we need to make sure that we stick to the best practice guidelines and principles around how we engage with participants in an assessment process" (P6).*

Inadequate expertise and *unclear and unethical intentions* were the third most mentioned supporting codes under this theme, with frequencies of 18 and 16 respectively.

A total of 50% of the participants regarded lack of expertise as a major ethical challenge in psychometric testing, as substantiated by the following quote:

> *"It is important that you know your ethics, know your Health Professions Council guidelines, you*

> *also need expertise and certain knowledge... on the tool that you work with and that you are going to use"*
> *(P2).*

Only two participants expressed concern regarding the practitioner's intentions when it comes to testing. However, these participants mentioned the concern a number of times. The following quote illustrates the perceived importance of this challenge:

> *"Sometimes people have different intentions, sometimes to the detriment of the person being tested. This, to me, clearly constitutes an ethical challenge in testing. You have to have the right intentions. That's just best practice and being professional" (P4).*

Training and qualifications had a frequency of 15, and was mentioned by all ten participants. The importance of proper training in specific psychometric instruments and the required qualifications needed to conduct assessments and testing were emphasized, as illustrated by the following quote:

> *"Well, I think that there are many people out there who are not properly trained and qualified to work with these tests. So, I think, first of all, you need to be properly qualified, you need to be registered, and then you need to be trained in the tests that you are going to use" (P2).*

Interestingly, the aspect of *continuous professional development* was deemed to be an ethical challenge facing professionals by only one participant, which was somewhat contradictory to my own expectations.

4.3.2 Human interface/ethical values

Values in ethics focused on 12 broad values that professionals apparently fail to incorporate into the testing process. *Fairness*, with a frequency of 31, was the leading code under this second-order theme. This ethical value can be defined as just and appropriate actions and the avoidance of favouritism and/or discrimination. Three participants ranked this as one of the most important challenges in psychometric testing. The following quote elaborates on this value:

> *"One of the key values would obviously be fairness. Fairness relates to the process and how the individual is treated in that process, so it's procedural fairness and it's fairness in the way decisions are*

made based on the results and so on. So, I think fairness is a key value" (P6).

Confidentiality was the supporting code with the second highest frequency, being mentioned on 24 occasions by six participants. It seemed clear that lack of confidentiality was deemed an important ethical challenge in the psychometric arena, as commented on by one of the participants:

"From an ethical perspective, confidentiality in the workplace seems to be the biggest challenge" (P3).

Integrity was mentioned 19 times by six participants. This value refers to the quality of displaying and maintaining high standards of moral character and behaviour. The following participant emphasised the importance of exhibiting this value by stating:

"For me, ethics has everything to do with integrity and truthfulness" (P8).

Yet another participant commented that the human side of psychometric testing requires some degree of integrity by stating:

"To be truthful to the standards required in our profession and to always be cognisant of the fact that we are dealing with people. That we are in a very delicate position to inhibit or enhance a person's career. So, to be truthful and to conduct ourselves with integrity" (P3).

Doing the right thing was the third leading value that emerged as a supporting code with a frequency of 13. Mentioned by two participants, this value relates to the concept of ethics in the broader sense, and was commented on as follows:

"Fundamentally, I believe, ethics is simply applying your good common sense about what is the right thing to do for the right reasons" (P5).

Another participant elaborated on this notion by commenting that this value is crucial for all stakeholders involved in the testing process, stating:

"For me, ethics refers to doing the right thing. And doing the right thing for all the parties that's involved in the process" (P6).

4.3.3 Technical interface

Related to the theme *technical interface* the code *misuse of psychometrics* had the highest frequency (46), and was mentioned by 90% of the participants. This theme was comprised of the inappropriate use of assessment information and utilising information for unintended purposes. One participant described it such:

> *"I think it is almost an obligation to understand exactly why the information is being used by clarifying exactly what the results can be used for, and any other use of the information can be questioned" (P8).*

Another participant elaborated on this by adding:

> *"Other ethical dilemmas prevalent in corporations is the misuse of psychometrics or the intended misuse of psychometrics for purposes to disposition certain employees due to poor performance, so, misunderstanding in that regard" (P3).*

Participant 8 even went so far as to suggest that this has always presented an ethical challenge by stating:

> *"There's still a lot of scepticism and wariness about assessments and they were misused in the past, and they are still misused today, even by psychologists, sometimes out of ignorance" (P8).*

Test administration, including testing arrangements, was the code with the second highest frequency of 42, and was mentioned by four participants. All four participants regarded this as a challenge when conducting testing, as substantiated by the following quote:

> *"Well, again, you would fail from an ethical perspective if you do not secure proper test administration" (P3).*

One participant emphasised the importance of having proper arrangements in place prior to testing by commenting:

> *"The worst, you know, is having improper testing arrangements or improper consideration of whether people are well rested, and you know, properly focused to be able to give their optimal performance" (P9).*

Inadequate supervision had a frequency of 29, and was mentioned by six participants. One participant clearly stated this as an important challenge in psychometric testing. The following quote substantiates this comment:

> *"The issue is not online or internet-based testing, the issue is unsupervised testing, because online is just a platform" (P6).*

4.3.4 South African context

Of the 34 responses to the theme *South African context*, the code *Westernised way of testing* as a major ethical challenge in psychometric testing emerged 14 times. One participant commented on the caution required in taking this approach by stating:

> *"We take the Western academic background and Western work philosophies and Western way of developing people. I think we don't always question those grey areas in terms of the constructs we're measuring and how applicable they are and how fair and ethical it is to use them when you're testing in multi-cultural, multi-lingual contexts" (P9).*

Multicultural and multilingual environment had a frequency of 12, and was mentioned by 50% of the participants as an important and significant ethical challenge when conducting psychometric testing in the South African context. One participant commented:

> *"I think we don't always question those grey areas in terms of the constructs that we're measuring and how applicable they are and how fair and ethical it is to use them as is when you're testing in a multi-cultural, multi-lingual context such as South Africa" (P9).*

Another participant agreed with this by saying:

> *"The South African context is so diverse. There are 11 official languages and different cultures, and I don't think we always take those into consideration when testing. That, to me, is definitely an ethical challenge which needs to be addressed" (P6).*

Utilising appropriate instruments for context was mentioned five times. This is clearly an important ethical challenge in the field of psychometric testing in South Africa. This reality is substantiated by the following quote:

> *"I think the challenge in South Africa is to get and use appropriate instruments, considering our population and culture and language groups" (P9).*

4.3.5 Regulatory context

The codes with the highest frequencies supporting the theme *regulatory context* included *test registration*, *test classification*, and *test regulation*. These three codes were mentioned 47 times. *Test registration* was deemed particularly important, as can be seen from the following quote:

> *"Then we also have tests that are not being regulated at all, and not registered at the Health Professions Council. I think the biggest challenge is to get our tests and testing practices sorted out in terms of regulation" (P1).*

Two participants regarded *test classification* as a challenge that is ignored by many professionals, with one participant stating:

> *"The ethical challenge is about classification, and many professionals show no regard for this" (P3).*

This was also the view of Participant 10, who elaborated on this by commenting:

> *"There is a requirement that your assessments have to be registered or classified with the Board if they are going to be used in South Africa" (P10).*

The third code supporting the theme regulatory context was *test regulation*, with a frequency of 7. Three participants regarded this theme as an ethical challenge. One participant expressed his concern in this regard as follows:

> *"There is a lack of a system in place that can regulate the practices in South Africa. We don't have a uniform system that actually regulates this practice very well. Then we also have tests that are not being regulated at all" (P1).*

This same participant considered this to be the biggest challenge in the field of psychometric testing, as substantiated by the following quote:

> *"I think the biggest challenge is to get our testing practices sorted out in terms of regulating testing" (P1).*

In contrast to the above, Participant 3 was of the opinion that the regulation of tests in South Africa is too strict, as expressed by the following statement:

"I think, from a test-publishing perspective, they feel there are too many regulations. If you compare how regulated the testing environment is in South Africa, it is much stricter than in the UK and America" (P3).

4.3.6 Individual context

Within this theme, *test-taker experiences* was the code with the highest frequency (21). Of the ten participants, only three considered this as an important ethical challenge, and Participant 6 suggested that:

"You need to make sure that it doesn't affect the person negatively and that he or she knows why they're engaging in the process and what's going to happen, and they have sufficient opportunity for preparation" (P6).

Another participant was of the opinion that it is also important to consider how we treat and engage with the test-taker, and said:

"For me, it's primarily around dealing sensitively and with integrity with the individuals being assessed" (P5).

4.3.7 Technological context

Online testing was the code with the highest overall frequency (40). All ten participants regarded this as an ethical challenge within the psychometric testing arena; however, opinions were mixed, with both positive and negative feelings regarding computerised testing being expressed. The following quotes substantiate this scenario:

"I'm quite concerned about the whole use of technology and online testing and the web, and also unsupervised testing for selection purposes" (P2).

and

"I don't think we can really afford to not use technology and online testing to its fullest extent, because it can improve what we can offer as well. It just creates a total different level of assessment that becomes possible" (P9).

Mention to *Generated reports* was noted twice by only one participant. However, I deemed

this a noteworthy ethical challenge to consider.

> *"It personally irritates me, the fact that online assessments have these expert-generated reports that takes no cognisance whatsoever of the context and the purpose of assessment. And that is an ethical dilemma" (P7).*

4.3.8 Organisational context

Under this second-order theme, *monetary incentive* presented the highest overall

frequency (31), being mentioned by 50% of the participants. The importance of this

challenge is supported by the following quote:

> *"I think a lot of practitioners see the testing arena as a money-making game, and they can't really prove hard in terms of their credibility" (P1).*

Another participant agreed with this by saying:

> *"I think there are a whole bunch of assessment company specialists that act purely from a commercial motive and they sell what they have and their job is to sell. So, they will sell rubbish" (P5).*

Four of the participants regarded *meeting the quota* as something worth taking note of. The

participants were particularly concerned about the effect of politics on testing procedures, as

evidenced by the following quote:

> *"It's the effect that politics play on the workplace nowadays, where you have to deliver equity, where you have to deliver a percentage of African people into specialist positions…so just to be fair to everybody and have the same kind of cut-offs for all race groups. That creates a lot of ethical concerns for us. We get a lot of pressure on the political front" (P2).*

Interpretation and feedback of results was mentioned by 2 participants as an ethical challenge

inherent in psychometric testing. The participants made particular mention of the

organisation in this regard, as substantiated by the following quote:

> *"I think there are a lot of challenges involved in the interpretation and feedback of results. I think, sometimes, people who interpret the results and provide clients with feedback don't always do so in a proper and ethical manner" (P4).*

4.4   Summary

This chapter captured the main findings that emerged from the study. A first-level content analysis was performed, which resulted in the identification of 56 codes. A second-level content analysis permitted the emergence of eight broad themes, which were then justified with quotes from the interviews conducted. An analysis of the results suggests that various contextual factors inform the practice of psychometric testing, including a professional, regulatory, technological, South African, individual, and organisational context. It also seems to indicate that the psychometric testing arena is comprised of both a technical and a human interface. The results of this research study will be discussed in detail hereunder.

Chapter 5: Discussion

5.1   Introduction

In Chapter 4, the results of the interviews were analysed. The purpose of this research was to gain a better understanding of the contemporary ethical challenges in psychometric testing in South Africa. From the responses gathered by means of interviews, it is evident that participants agree that the psychometric arena poses a variety of ethical challenges, and that psychometric testing involves both a technical as well as a human interface. In answering the research question, some new ideas and insights were discovered. The key themes, identified in Chapter 4, were used as a springboard to generate a tentative framework for conceptualising the contemporary ethical challenges in psychometric testing in South Africa. This framework will be presented in this chapter to guide the discussion of the results presented in Chapter 4.

5.2   A framework to conceptualise the contemporary ethical challenges in psychometric testing in South Africa

It was decided to develop a broad explanatory framework that can be utilised to create an enhanced understanding of the contemporary ethical challenges in the South African psychometric testing arena. This framework is illustrated below, where after it will be discussed in component form.

Figure 2: A Conceptual Framework for Understanding the Contemporary Ethical Challenges in Psychometric Testing in South Africa
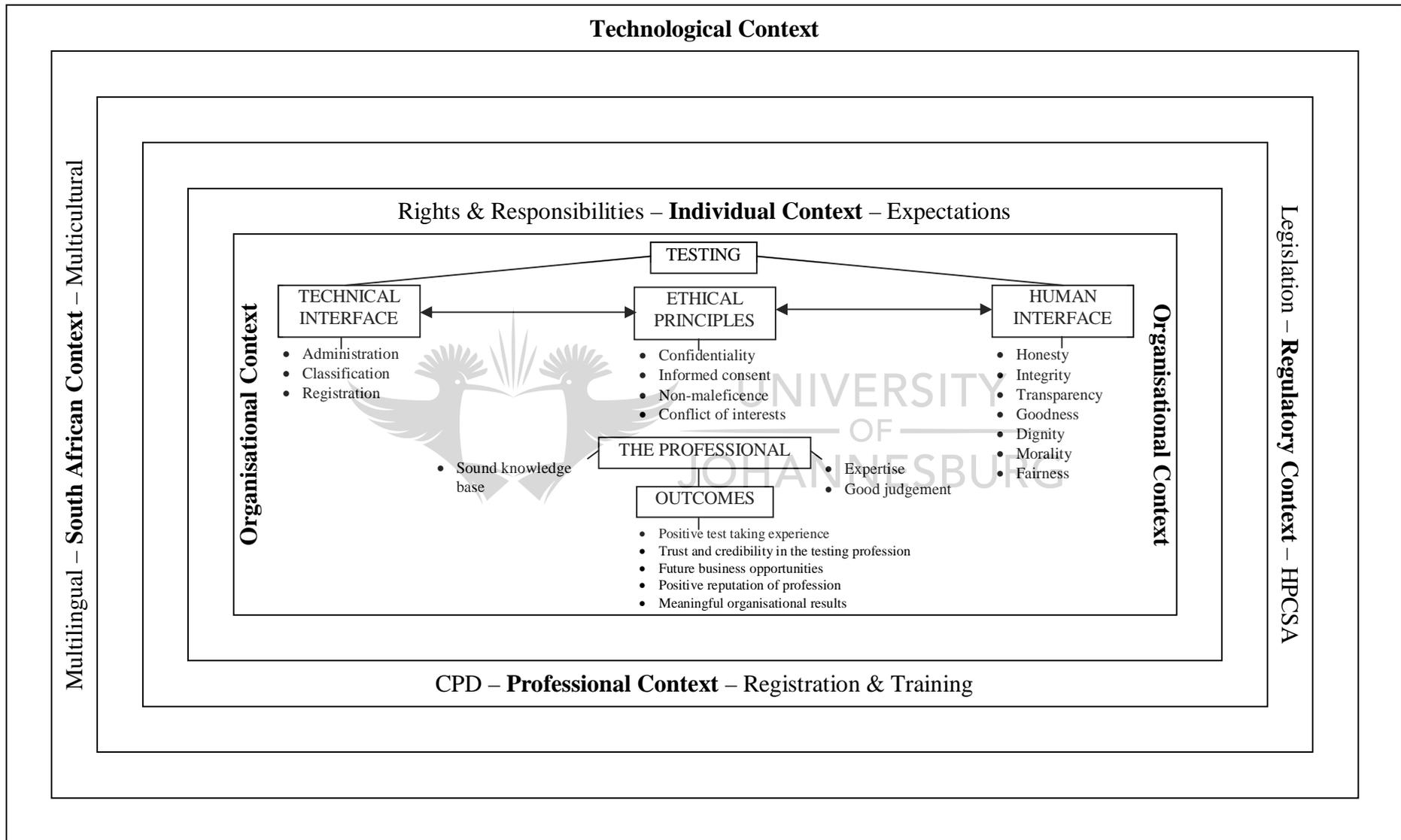
5.2.1 Technological context

During the individual interviews, participants expressed mixed feelings about computerised testing. On the one hand, some practitioners saw the benefits of large-scale computerised testing. For example, one participant indicated that utilising technology to its fullest extent could improve what practitioners can currently offer. On the other hand, some practitioners felt threatened by computerised tests due to their own lack of familiarity with computers. They were also concerned about the lack of familiarity with computers among test-takers in South Africa and the loss of information regarding test-taker behaviour. The cost of the tests, as well as the quality of the back-up service, was commented on by one participant, who stated: "I wasn't born in that era where technology boomed, so, for, me it presents a challenge as I myself is not that computer literate" (P3). Nonetheless, regarding the needs that practitioners identified, participants were of the opinion that more computerised tests need to be developed, provided that they are used with caution with test-takers who have low levels of computer familiarity.

Many of the participants agreed with Plug (1996), who asserts that "computerised testing is the direction of the future" (p. 16). In the current study, critical comments were also made by practitioners regarding the use of computer-generated test reports and the importance of having a psychologist interpret such information. Some participants were heavily opposed to this practice, and felt that only psychologists can meaningfully interpret reports, and that using a computer-generated report without the aid of a psychologist is irresponsible. This resonates well with the critical aspects of computer-generated reports found in the literature related to good assessment practices. It is vital that computer-generated reports meet certain quality standards. In this regard, the standard EFPA (European Federation of Psychologists' Associations) conceptual framework for reviewing tests devotes an entire section to the evaluation of the quality of computer-generated reports

(Muniz, Prieto, Almeida, & Bartram, 1999). The framework evaluates computer-generated reports according to their scope or coverage, accuracy or reliability, relevance or validity, fairness or freedom from systematic bias, acceptability, practicality, and length.

Other than having to be of a high quality, computer-generated reports also need to be used in appropriate ways by practitioners. In the International Guidelines on Computer-based and Internet Delivered Testing (Bartram & Coyne, 2003) it is indicated that good practices in the use of computer-generated reports include being aware of the limitations of the interpretations provided and the rationale on which the interpretation is based, ensuring that the language of the report fits with the needs of the intended audience, and adding information from other sources to the interpretation provided so as to get a more rounded picture of the client. It is probably the latter aspect that practitioners in the current research study had in mind when they indicated that a psychologist needs to interpret the information from a computer-generated report so as to integrate it with other information on the client.

Participants agreed with Bartram and Hambleton (2006) that the Internet actually allows practitioners to exercise far more control than they have been able to do in the past over the distribution of test materials, management of the testing process, and the collection of data.

5.2.2   South African context

According to Foxcroft (2002), testing is a Western-world activity that cannot always be transported to non-Westernised cultures. Psychological testing was brought to Africa in the colonial era, and is not something that is native to Africa and its people (Foxcroft, Paterson, Le Roux & Herbst, 2004). Given the multicultural nature of the South African society and differing levels of literacy and education, taking a test is not something that is necessarily within the everyday experience world of many people in Africa, and practitioners

are faced with the task of performing assessments on clients from varied cultural backgrounds (Foxcroft et al., 2004). In this regard, and confirming my expectations, *Western way of testing* had the highest overall frequency. Participants were apprehensive regarding our current testing practices because of the fact that testing is not simply black and white. The participants agreed with Foxcroft (2002), and stated that today's testing practices are applied in a multi-lingual, multi-cultural context. In line with this, they questioned the fairness of current testing practices in this regard. Despite the above, and contrary to my expectations, only 2% of the participants deemed the lack of fairness in this regard an ethical challenge.

Foxcroft et al. (2004) further state that, at present, the value of tests is limited to some extent because most of the tests available were not developed for our multicultural population. Their norms are outdated, or there are not differentiated norms for different culture groups (Foxcroft et al., 2004). Participants agreed with this by emphasising that test constructs should be updated and made appropriate for all cultural groups, although they acknowledged that this is no easy task. As one participant commented: " I think we don't always question those grey areas in terms of the constructs that we're measuring and how applicable and how fair and ethical it is to use them as is when you're testing in multi-cultural, multi-lingual contexts" (P9). Yet another participant indicated that "There are a lot of ethical issues, ethical challenges when you work cross-culturally. Some test-takers may have difficulty expressing themselves on these tests. I can't tell you what we are supposed to do about this, but this is definitely a concern for me" (P7).

In addition, according to Meiring (2007), ethical test practices require the use of locally developed norms to accurately interpret test performance. However, many tests developed and normed in Europe, the UK, and the USA are utilised by test users in Africa. Often, the norms developed elsewhere in the world are applied "with caution," and little or no

attempt is made to develop local norms. The use of inappropriate norms could, according to Meiring (2007), lead to incorrect decisions being made on the basis of the results, and problems being over- or under-identified. Lack of test development and expertise in diverse South Africa are but some of the reasons why local norms are often not developed (Meiring, 2007). This aspect needs to be addressed by professional societies, training institutions, and test development organisations as a matter of great urgency.

With regards to the norms, one participant commented: "My perception is that we fail a lot when it comes to the norms, the cut-offs. Are those for the South African context or overseas context? Have these been researched for the specific population that you are testing?" (P10). Participants also expressed the view that there should be a range of norms for different categories of people, as suggested by the following comment: "There should be different norms and cut-offs for the different populations" (P3). This is in line with the argument of Foxcroft et al. (2004) that the choice of norm to use would then largely depend on the characteristics of the specific population from which the test taker originates.

5.2.3 Regulatory context

The Professional Board for Psychology of the HPCSA is the sole national statutory body responsible for *inter alia* classifying, registering, and reviewing the use of psychometric and psychological tests, questionnaires, apparatus, and instruments used for the determination of intellectual ability, aptitude, personality make-up, personality functioning, psycho-physiological functioning, and psychopathology (Foxcroft, 2002). In some cases, the legislation is extended by regulations promulgated by the relevant minister, which have the same force of law as the Act with which they are associated. Within this research study, the regulatory context was deemed to also include broader legal and governance-related requirements.

The majority of participants were of the opinion that certain regulatory contextual factors do, in fact, inform the expected ethics that govern the testing process. *Test registration* and *test classification* had the highest frequencies overall, and were considered the most prominent ethical challenge from a regulatory context. This was clearly a concern for the participants, and many were of the opinion that the HPCSA is to blame. In this regard, a participant commented: "We need an ethical body which work is viewed ethically because, at this stage, the Health Professions Council is not being taken serious for what they are doing in terms of regulating testing and classifying tests" (P10). Foxcroft (2002) argues that the use of tests not registered with the Professional Board for Psychology of the HPCSA happens not only because of wilful malpractice, but links to difficulties experienced in terms of testing, and is a symptom of a wider problem.

According to Foxcroft (2002), the reasons for using unregistered tests can be the accessibility of such tests, a lack of awareness, and a need to be responsive to the environment, and the fact that many of the unregistered tests are more up to date than the registered tests. This is in line with some of the participants' opinions, as one commented: "We need to clean the list of so-called registered tests on the website of the Board. The list on the website of the HPCSA is totally out of date. Many practitioners use unregistered tests because they are actually more up to date. I know this is unethical, but it's the reality" (P5). The following aspects, in particular, were pointed out by the participants:

- Many tests used in South Africa have an international reputation and a solid research base. However, these tests are used without considering the fact that they have not been standardised for use in a country as diverse as South Africa.

- There is a lack of awareness of and knowledge about which tests are registered and which are not and,

- Industry is not fully aware of the role of the psychologist in the administration and interpretation of tests.

Participants were also wary of using tests that are not registered with or classified by the Psychometrics Committee of the Professional Board for Psychology. In this respect, one participant commented: "Then, we also have tests that are not being regulated at all, and not registered with the Health Professions Council, and some people actually use these tests on a daily basis" (P1).

Furthermore, the majority of the participants were of the opinion that there is currently no uniform system in place that regulates testing practices, and that this is a concern, as substantiated by the following comment made by one of the participants: "There is a lack of a system in place than can regulate the practices in South Africa because currently we have all sorts of test developers running around with different sorts of classification of their tests, and we don't have a uniform system that can actually regulate this practice very well" (P1). In this regard, Foxcroft et al. (2004) asserts that the main concern of the Psychometrics Committee is to classify a test as being of a psychological nature or not and, in the process, comment on aspects of the test's psychometric properties. However, the committee does not do a comprehensive quality review. There is thus a possibility that classified or registered tests are not necessarily of a high quality, and practitioners should be aware of this.

5.2.4 Professional context

Professional registration with the Board was the theme with the highest overall frequency and was also considered to be the most important ethical challenge within psychometric testing. Some participants felt that the negative connotations with psychometric testing could be ascribed to unqualified, incompetent administrators, and not the tests themselves, as one participant commented: "I think the challenges today are not the

tests themselves, but rather the fact that people are not equipped or basically registered and qualified to work with psychometric tests. They then involve themselves with psychometric assessments and tests and the interpretation of these assessments" (P4).

Training was highlighted as a strategy to improve the quality of tests and testing practices in South Africa. Participants indicated that students in psychology as well as psychologists have to receive relevant and applicable training. Participants emphasised that there is a need for established psychologists to be retrained and updated in new developments and practices in psychological assessment. The participants further commented that the HPCSA should regulate the training and registration of professionals more effectively. One participant commented: "I think that the HPCSA can do much more in terms of training in the sense that they could maybe advertise more in papers and journals and say, "Listen, this is why you need to be a registered psychologist or at least registered with the HPCSA; this is why registration and qualification is necessary to be able to work with these tests" (P2). These observations are in line with the argument of Foxcroft et al. (2004) that assessment practitioners are not always adequately trained in the application and administration of psychological tests.

Unclear and unethical intentions were also a concern among participants. In order to reap the potential benefits, the use of tests must be properly managed. Participants suggested that if inappropriate tests are used, or the information from tests is misunderstood or even ignored, there will be no advantage in using tests. The majority of the participants agreed that the management of tests should include regular reviews and monitoring the ethical use thereof.

In addition, as with any powerful tool, the potential for misuse is ever present. This was confirmed by the majority of the participants. Foxcroft et al. (2004) mention that bad practice can reduce the efficiency of test use, cause considerable suffering to individuals,

damage the company's image with employees, trade unions, and clients, and even lead to

contravention of the law. In this regard, a number of participants made suggestions regarding

other components that may contribute to the broader context of ethical testing practices, such

as best practices guidelines. Nine of the ten participants agreed with the ITC (International

Test Commission) Guidelines, which indicate that the goal of ethical testing practices will be

attained by practitioners who have the necessary competencies spanning the entire process of

testing. One participant commented: "Practitioners need to be sufficiently trained in the

different tests; they need a sound knowledge base of testing" (P7).

5.2.5   Individual context

Foxcroft, Roodt, and Abrahams (2001) assert that the relationship between the

assessment practitioner and the test-taker in many ways represents a power relationship. The

practitioner holds most of the power, leaving the client in a vulnerable position (Foxcroft et

al., 2001). Bearing this in mind, the test practitioner should ensure that the test-taker does not

perceive the testing process and its outcome as negative and disempowering because of unfair

or unethical testing practices (Foxcroft et al., 2001). Not surprisingly, the majority of

participants agreed with this statement, as one participant commented: "It's the practitioner's

job to make sure that it doesn't affect the person negatively and that he or she knows why

they're engaging in the process, and what's going to happen, and that they have sufficient

opportunity for preparation" (P6).

Furthermore, the test administrator has to account for factors such as a lack of

electricity and access to writing materials, as well as test-takers that travel long distances

without food and water to attend testing sessions. These adverse situations could be to the

disadvantage of test-takers. On the other hand, psychometric testing is sometimes used to

level the playing fields. Many test-takers from previously disadvantaged backgrounds who

have not received a quality education have to compete with others on an equal basis in a psychological test that is designed to measure potential.

5.2.6 Organisational context

The majority of the participants were of the opinion that *monetary incentive* is an ethical challenge within the field of psychometric testing. The testing practitioner is ethically obliged to not to exploit the client when charging them for their work and related expertise. However, the participants argued that many practitioners misuse their services for financial gain.

Feedback of results was not a particular concern among participants. However, the researcher deems this an important and noteworthy aspect to consider. According to Foxcroft (2002), it is the assessment practitioner's ethical responsibility to provide feedback on the testing, be it to the individual, school, community organisation, or employers. What is of critical importance is that the results are conveyed so that their practical application is clear. This implies that the testing has to be perceived to be of practical value, which is one of the hallmarks of ethical testing practices (Foxcroft, 2002).

A number of participants were also of the opinion that politics in the workplace presents an ethical challenge when it comes to psychometric testing. In this regard, effects of equity were mentioned as a dilemma in testing. Participants expressed concern that many clients pressurise practitioners to make recommendations in order to satisfy the equity figures, even if these recommendations are to the detriment of other candidates. In South Africa, there is tension between achieving equity in the workplace and productivity. This debate has relevance when it comes to the application of psychometric tests and the selection of norms (Meiring, 2007). In the current study, the argument was raised that standards should not be lowered and that all cultural groups should meet the same standard, especially

when competing in a global economy. The counter-argument raised was that psychological tests should take into consideration the inequality of the past, and that different norms and standards should be set for different cultural groups.

5.2.7 Technical interface

In the results, *misuse of psychometrics* represented the code with the highest overall frequency, indicating that participants regarded this as an important ethical challenge facing them in their testing practices. According to Hambleton, Merenda, and Spielberger (2005), the field of testing and assessment is fraught with faulty practices that have resulted in many serious consequences. Unfortunately, according to these authors, psychologists and allied professionals, in general, have failed to recognise the seriousness of the problems created by the misuse of tests and testing. According to the participants, many huge corporations misuse psychometric tests for the purpose of dispositioning certain applicants due to poor performance. Another concern was the abuse of information to substantiate certain decisions, either with regard to appointing or promoting a certain candidate.

Test administration was also deemed an ethical challenge in testing. Participants indicated that logistical difficulties may, at times, impair the testing process. According to Foxcroft et al. (2004), testing is sometimes done in rural, isolated areas, which makes administration more difficult. *Inadequate supervision* was regarded as an ethical challenge from a technical perspective, specifically in terms of online testing. The main concern among the participants revolved around the use of unsupervised modes of test administration, in that such administration will, according to the participants, adversely affect validity, and therefore, utility. In addition, the participants feared that the lack of supervision inherent in online testing may compromise test security. According to Bartram and Hambleton (2006),

this may be a critical issue for traditional ability tests, which have a fixed set of items. Once these become widely known, the test will be of little value.

5.2.8 Human interface/ethical values

According to the South African Board for People Practices (SABPP), "sound moral character is almost universally accepted as a value of major, if not the highest importance for a professional" (2010, p. 31). Values can be defined as the core beliefs and attitudes one displays in terms of what is good or desirable (Kenyon, 1999; Smith, Van Vuuren & Visser, 2003). Certain values are fundamental in promoting the goals of the industrial psychology profession, and offer practitioners guidelines for ethical and professional conduct. Based on an extensive literature search, these values may include integrity, trustworthiness, respect, fairness, honesty, loyalty, transparency, accountability, consistency, and reliability (APA, 2010; Hedge & Borman, 2008; HPCSA, 2006; Kenyon, 1999; King III, 2009; Lefkowitz, 2006; Lowman, 2008; Rossouw & Van Vuuren, 2010; Smith et al., 2003). Each of these values is defined in Table 8.

Table 8

Ethical Values

Ethical Value	Definition	Reference
Integrity	Quality of displaying and maintaining high standards of moral character and behaviour.	Oxford Dictionaries Online, 2010
Trustworthiness	Deserving of trust; development of credibility.	Hedge & Borman, 2008
Honesty	Truthful, straightforward, and sincere in terms of intentions and motivations.	Oxford Dictionaries Online, 2010
Transparency	Openness and ability to disclose information.	Cf. King III, 2009
Fairness	Just and appropriate actions; Justice, equity, and equality; Treating all	Lefkowitz, 2006; Oxford Dictionaries Online, 2010

	people equally and avoiding favouritism and or discrimination.	
Reliability	Being dependable; the ability to 'come through'- results in an effective working relationship.	Hedge & Borman, 2008
Loyalty	Showing commitment and constant support.	Oxford Dictionaries Online, 2010
Consistency	Acting in a consistent and accurate manner, free of contradictions.	Oxford Dictionaries Online, 2010
Respect	Honouring and protecting people's rights and dignity.	APA, 2002; Kenyon, 1999
Accountability	Acknowledging responsibility and being answerable for results and/or consequences.	Cf. King III, 2009

The ethical values presented in Table 8 ought to be embodied by the testing practitioner, as practitioners are expected to adhere to a set of high personal values that maintain and exemplify ethical behaviour. Such an ethical and moral character on the part of the practitioner, based on the aforementioned values, is thus fundamental, as it enables the practitioner to meet test-takers' ethics expectations. Of the aforementioned ethical values, *integrity* was regarded by nine of the participants as the most important value to ensure in the testing process. Typically, integrity is associated with terms such as "honesty, truth, truthfulness, honour, reliability, fairness, consistency, incorruptibility, and wholeness; an uprightness of character; a human disposition that implies human conduct that will stand the test of moral propriety" (Fourie, 2005, p.1). Integrity can be further defined as "the quality of moral self-governance at the individual and collective levels" (Werhane & Freeman, as cited in Petrick & Quinn, 2000, p.4).

Issues of bias and fairness are of particular importance in the socio-political and business environment of South Africa, and therefore demand special attention from testing practitioners (Foxcroft et al., 2004). In the current study, the ethical value *fairness* was regarded as the most important value to embrace when conducting psychometric testing. According to The Code of Fair Testing Practices in Education (Joint Committee on Testing

Practices, 1988), it is the responsibility of both the test user and the test developer to ensure fairness in the testing process. Participants agreed with this by arguing that test developers should conduct sensitivity reviews of test materials. Furthermore, they agreed with the Code by stating that test users should review and evaluate the sensitivity reviews conducted by test developers.

Maintaining confidentiality is another significant issue associated with psychological testing, and the psychologist is bound by ethical codes to refrain from referring to a patient's results outside of the appropriate context (Hogan, 2007). *Confidentiality* was the code theme with the second highest overall frequency. According to the Code of Practice for Psychological and Other Similar Assessments in the Workplace (SIOPSA, 2006), it is the ethical responsibility of the psychologist and testing practitioner to communicate the limits on confidentiality in a particular testing situation to the test-takers. The Code of Practice further states that it is the responsibility of the testing practitioners to refrain from divulging personal information about the candidate that is not relevant to the purpose of the assessment.

5.3 Summary

This chapter attempted to draw together the overarching themes that emerged from the data analysis in the form of a conceptual framework. A consolidated view of the contextual factors informing ethical testing practices was provided. Views were also consolidated regarding the role of the HPCSA in regulating the use of tests and classifying tests accordingly. The framework (see Figure 2) illustrates the interrelated and interdependent components that ought to govern the testing process, as confirmed by the industrial psychologists (participants) involved in this study. This ethical process of psychometric testing is informed by a spectrum of contextual factors, which include technological, regulatory, professional, organisational, and individual components, as well as the unique

South African context. The regulatory context is comprised of broader regulations and legislation (Rossouw & Van Vuuren, 2010), while the professional context focuses on particular regulations specified for the industrial psychology profession (Lefkowitz, 2006). The individual context applies to the test-takers, and includes their personal values and their expectations of the testing process.

The testing process consists of both a technical and human interface, and is founded on one fundamental ethical component, namely ethical principles. These ethical principles are expected to inform the professional's behaviour, attitude, and approach to the testing process. Should the industrial psychologist/practitioner abide by these ethical obligations throughout the testing process, successful and positive ethical outcomes for both the industrial psychologist and his/her clients are likely to result. Since these positive outcomes relate to industrial psychologists as well as their clients (i.e. test-takers), the importance of both the client and the industrial psychologist engaging in ethical testing practices is emphasised. The positive outcomes for the industrial psychologist reside mainly in an ethical reputation and identity as a result of a trustworthy and credible service offering (Hagenmeyer, 2007), as well as meaningful organisational results. The positive outcomes for the test-takers are mainly comprised of positive test-taking experiences. This ethical relationship may also enhance the likelihood of the formation and subsequent reinforcement of an ethical conscience and mindset for both the industrial psychologist and the clients in all their respective business functions.

The next chapter will set out conclusions and recommendations.

Chapter 6: Conclusions and Recommendations

6.1 Introduction

The goal of this research study was to gain an informed understanding of the contemporary ethical challenges in psychometric testing in South Africa. From the responses gathered by means of interviews, it is evident that participants agree that psychometric testing in a country such as South Africa presents unique ethical challenges. These challenges pertain to a number of stakeholders, including the practitioner, the test-taker, test distributors and publishers, as well as the broader industrial psychology profession in South Africa.

6.2 Overview of the study

The introduction and background to the dissertation were provided in Chapter 1. In Chapter 2, the literature study was discussed, using the importance of ethics in psychometric testing as a frame of reference. Different systems such as codes of ethics and regulatory practices to ensure ethical testing practices were also examined. An outline of the research methodology was provided in Chapter 3. This included the research design, sampling methodology, data gathering, and data analysis. A description of the interviews was also provided. In Chapter 4, the results of the interviews were presented. Chapter 5 investigated the results of the study in more detail, linking them to relevant literature where possible, and substantiating arguments with quotes obtained from the interviews conducted.

The issue of further research is explored in this chapter. Implications for practitioners in terms of the findings from the research are discussed and recommendations are made. A reflective analysis on the study is also presented.

6.3 Main findings

Based on the findings of this research study, it seems clear that the field of psychometric testing in South Africa presents many ethical challenges. Many of these challenges overlap with those discussed in literature and the results of research conducted internationally. However, new insight into challenges specific to the African continent emerged within the context of this study. These include challenges such as multiculturalism and multi-linguism, which are inherent in South Africa, given the vast array of cultures and races. Given the urgent needs and concerns that were highlighted by the practitioners who participated in this study, if something is not done regarding these challenges, these needs and concerns will remain, and the field of psychometric testing will suffer in the long run.

Findings also suggest that the requirement that practitioners should only use registered tests needs to be reviewed as a matter of great urgency for three reasons: Firstly, there is a need to clarify misconceptions in the field that tests are only considered to be psychological tests if they are registered, which has led to a proliferation of the use of unregistered tests, many of which would qualify to be classified as psychological tests, by non-psychology professionals. Secondly, it is currently not possible for practitioners to use only tests from the list of registered tests as the list does not sufficiently cover all the domains that practitioners need to assess. Thirdly, the present study has raised questions related to whether, instead of requiring practitioners to use registered tests, the emphasis should rather be placed on requiring practitioners to use high-quality, culturally appropriate tests.

The findings further suggest that the test classification system and process currently in use needs to be reviewed. In view of the fact that psychological testing in South Africa falls under statutory control, there will always be a need to classify a test as a psychological test or not. However, the current system and its processes go further than just making a classification decision by also adding elements of a test review. This limited review,

however, is not comprehensive enough, is not updated on a regular basis, and is not published anywhere so that practitioners have access to it.

Furthermore, the findings of this study indicate that, as part of the CPD system that has been introduced for psychologists, specific training opportunities should be provided on an ongoing basis to enable practitioners to expand their knowledge of testing and psychometrics, broaden and update their repertoire of tests, and introduce them to newer assessment methodologies such as online testing. Training should raise awareness regarding ethical testing practices, and practitioners should be empowered to grapple with testing-related issues in a multicultural and a multilingual context.

In addition, existing tests urgently need to be updated, revised, and adapted for use in South Africa. Findings indicate that attention should be paid to issues specific to South Africa, such as culture and language, when adapting tests. The role of the HPCSA in monitoring and regulating test use is currently not up to standard, and practitioners indicated that this should be critically evaluated. Other findings suggest that one of the major ethical challenges facing testing in South Africa is the registration of professionals who are equipped and able to conduct testing, and that practitioners need to take ownership. The practitioners all indicated that organizations and companies utilizing psychometric tests need to do so with clear and ethical intentions, so as to prevent the possibility of misuse of tests, be it for monetary gain or disadvantaging certain candidates.
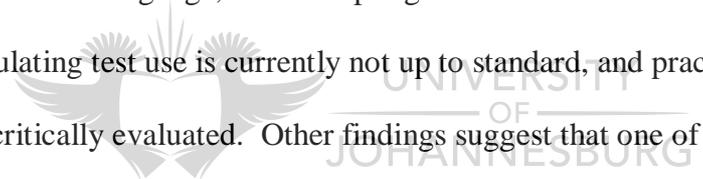
6.4   Recommendations

It is appropriate to make certain recommendations for further research. The findings of this research study are expected to facilitate an enhanced understanding of the contemporary ethical challenges in psychometric testing in South Africa. A similar type of conceptual framework to the one presented in Figure 2 may be beneficial in informing and guiding the ethical conduct of industrial psychologists in general, as well as other practitioners in other professions.

This section contains recommendations for further research as well as recommendations aimed at assisting the stakeholders, including the industrial psychology profession, test distributors and test publishers, and industrial psychologists and their test-takers in ensuring ethical testing practices.

6.4.1   Further research

Since this study was exploratory in nature, further research on the matter should be undertaken. Future research could benefit from including psychometrists as participants in the study in order to broaden the contributions and perceptions surrounding the testing process. Further research could also benefit from designing a questionnaire based on the conceptual framework (see Figure 2) so as to validate the findings through quantitative research. The interviews were conducted only with a specific population, namely registered industrial psychologists. Further research should therefore be done with other samples as well, such as actual test-takers. The same interview questions can be used, and they may be revised to address shortcomings. Further research should also be done on educating stakeholders such as test-takers on ethical and fair testing practices and their rights and responsibilities in the testing process. Another possible avenue for further research is the issue of how professional associations can play a role in promoting ethical testing practices.

6.4.2 Industrial psychology profession

The psychometric testing profession may benefit from the design of an updated and separate code of ethics that addresses the profession's specific ethical challenges by, for example, developing ethical guidelines relevant specifically to testing practices. Training on the identified ethical values and principles may also be required so as to ensure that testing practitioners and test administrators are well informed and subsequently demonstrate sustainable ethical behaviour. This training can also be used as part of the profession's CPD programme.

6.4.3 Industrial psychologists

The proposed conceptual framework may increase industrial psychologists' awareness of test-takers' expectations of the testing process. Industrial psychologists may find this conceptual framework useful as a guideline for ethical conduct in their testing practices, as it will assist them in meeting test-takers' expectations. It is of primary importance that industrial psychologists inform and explain to their clients/test-takers that they are bound by a profession-based code of ethics.

6.4.4 Clients/test-takers

Clients may consider utilising the conceptual framework as part of the initial engagement with the testing practitioner to ensure that their expectations are met. Industrial psychologists and their clients may thus benefit from testing such a conceptual framework, and adopting and formalising it as part of a contract at commencement of engagement in order to guide ethical conduct within the testing process.

6.4.5 Test developers, publishers, and distributors

This group of stakeholders could apply and utilise the conceptual framework in their respective business functions. In this regard, test publishers should endeavour to control the release of tests to qualified persons only. The proposed conceptual framework could assist them in complying with this basic ethical requirement. Publishers and distributors of psychometric tests and instruments must make certain that the tests they market are properly developed and designed and are of potential value to a particular organisation and the diverse South African society as a whole. By ensuring that the tests are researched properly with the right norms and for the right population, these stakeholders can ensure ethical testing processes.

The next section will address the potential implications of the current study for the psychometric testing arena in South Africa.
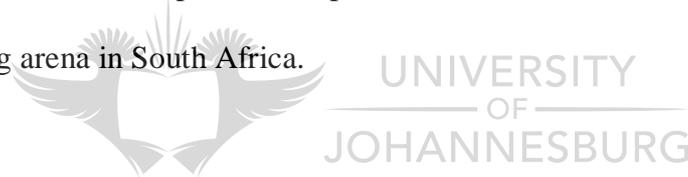
6.5 Implications of the findings

The field of psychometric testing in South Africa faces many challenges at present. Among these is that appropriate tests should meet stringent psychometric standards are needed for all groups in our multicultural society if testing practitioners are to succeed in employing fair testing practices. Intensive, large-scale test development, adaptation, and revision projects need to be urgently undertaken if South Africa's psychometric testing practitioners are to rise to the challenge of performing ethically and culturally sound testing (Foxcroft et al., 2004).

The Human Sciences Research Council (HSRC), which was the largest developer and supplier of tests until the early 1990s, has been restructured, and it is still uncertain as to what role, if any, it could and should play in test development in the 21st century (Meiring, 2007).

Since the demise of the HSRC as a major test developer, smaller companies have sprung up to import, develop, and supply tests, but there is no body or organisation to co-ordinate test development activities (Meiring, 2007). The key drivers of a new research agenda in terms of testing was the new constitution and stronger demands for cultural appropriateness of psychometric tests, which culminated in the promulgation of the Employment Equity Act 55 of 1998, Section 8.

It is quite clear that there is a need for a single organisation to take ownership of psychometric testing in South Africa, particularly relating to issues of high-quality testing practices, culturally appropriate tests, and psychometric test functioning within a framework of an internationally agreed set of guidelines. I am of the opinion that South Africa is in need of a professional body that can take up this role.

6.6   Limitations

In this study, four main limitations were identified. Firstly, according to Landman and Mouton (2001), empirical studies in ethics are notoriously difficult because they fall within the category of sensitive research. The authors suggest that ethical studies fall primarily within this category because the research is seen to have a degree of "reactivity" involved. They define reactivity as "the phenomenon in social research where research subjects and participants react and respond in various ways because they are aware that they are being investigated, which in turn can affect the overall validity and reliability of social science data" (p. 35). Any study that addresses matters of morality, private actions and behaviours, or potentially threatening issues is generally considered sensitive research. This constitutes a possible limitation of the research study.

Secondly, since this study was an exploratory study of the contemporary ethical challenges in psychometric testing, it does not provide exhaustive coverage of the topic. Furthermore, the sheer number of testing practitioners in South Africa constitutes a limitation. Thirdly, the participants in this research study were all Caucasian, which constitutes a potential limitation of the study. Lastly, as a result of using purposive sampling, different participants will most likely take part in future follow-up studies and, as a result, other themes may emerge, as they may share different viewpoints. This may impact the transferability and dependability of the study.

6.7 Reflective Analysis

If I had to conduct this research again, there would be certain aspects that I would address and execute differently. In the area of research, limitations necessarily apply. In the case of this specific research, the following restrictions were noted: this study focused on qualitative research only. Triangulation, i.e. using qualitative and quantitative research, might have been an alternative. The interviews conducted were done with a specific portion of the population. Ideally, an additional, random selection of psychometrists and test-takers who have undergone psychometric testing, as well as registered industrial psychologists of different races, would have been interviewed. Another option would have been to conduct a comparative analysis of the impact of psychometric testing on organisational ethical behaviour. A more comprehensive analysis could therefore be considered for further research.

However, the goal of the research was achieved despite the abovementioned shortcomings. This study forms a basis for further research, and the research questions may be used subsequent to some amendments thereto.

6.8   Final thoughts

The key objective of this study was to identify the contemporary ethical challenges in psychometric testing in South Africa so as to promote ethical testing practices. It was believed that the findings of the study could contribute in the following ways: (1) Enhance the knowledge base regarding possible contemporary ethical challenges in psychometric testing in South Africa, (2) provide greater clarity and understanding to specific stakeholders regarding the nature and scope of possible ethical challenges in their specific domain of practice, (3) contribute towards addressing these ethical challenges by searching for possible solutions, and (4) explore the possible need to develop a new set of ethical guidelines to govern the use of psychometric tests in South Africa specifically.

Ten in-depth interviews allowed for the design and validation of an exploratory conceptual framework that encompasses the ethical components perceived to be integral to the testing process. The conceptual framework outlines the ethical challenges inherent in psychometric testing, and may be applied by both industrial psychologists and their clients in their testing engagements. This awareness and understanding may inform and promote ethical behaviour in testing practices, as well as encourage industrial psychologists and testing practitioners to strive for the highest standards of professionalism and ethical excellence.

In conclusion, the way in which psychologists respond to new challenges will largely shape the future of psychometric testing in South Africa. The current challenges faced by testing in South Africa have the potential to stimulate the developers and users of tests to new heights in their quest to develop appropriate measures that can be used in fair and unbiased ways to the benefit of individuals.

It is hoped that this research study has set the benchmark for more regular research to be conducted with respect to the contemporary ethical challenges in psychometric testing in South Africa.

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