

**Assessing the predictive strength of a
Clinical/Counselling Psychology Master's degree
selection process**

R Derwin

 **orcid.org / 0000-0003-2793-1158**

Mini-dissertation accepted for the degree Master of Arts in
Clinical Psychology at the North-West University

Supervisor:	Dr Ruan Spies
Co-Supervisor:	Mrs Heleen Coetzee
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Summary

This study aimed to investigate the validity of a selection process for a clinical and counselling psychology master's degree at an undisclosed university in South Africa. Assessing the validity of such a process is essential, as this process selects candidates who, after completing their degree, will provide mental health resources to communities in SA. Applications for these degrees far outweigh the limited number of positions available, thus leading to a vast number of individuals who are not accepted into these programmes and can therefore not register as clinical or counselling psychologists. It is therefore imperative to select candidates who possess the necessary skills and characteristics required of a “good” psychologist.

The selection process at the participating university included six different selection activities, each assessing different skills sets and attributes of the candidates. Together, these activities are set to evaluate the overall potential of the candidate to become a “good” psychologist. The activities include two interviews, a metaphors activity, a research task, a case-study activity, and a problem-solving activity.

This study defined a “good psychologist” as one who possesses the relevant attributes, skills and characteristics required to develop strong working alliances with clients in psychotherapy – an important contributing facet of therapeutic change within the client.

The study's aim was achieved by completing correlation and regression analyses between the six selection activities, the six course modules, and the course average in the student's M1 year. Results showed significant positive regressions between the metaphors activity, child psychopathology, and theory of psychological interventions modules, between the research task and neuropsychology, between the psychopharmacology and psychopathology modules, and between the problem-solving activity and the course average.

The case study activity negatively predicted the ethics and practical work and applied and community psychology modules. The conclusion was that the selection process can be considered valid, as the skills assessed for most of the selection activities positively correlated and predicted the skills required to succeed both academically in the M1 year and as a practising psychologist. This indicates that this selection process selects candidates who are considered “good students” with the potential to be “good psychologists”. However, the case study activity required further investigation, as the skills that are purportedly assessed should correlate and positively predict the ethics and practical work module, which was not the case.

When reflecting on this research process as a whole, I consider it to have been a challenging yet rewarding experience because it challenged my abilities to manage responsibilities and pressures across all life domains and exhausted all physical, mental, and emotional reserves. The additional effects and consequences of a worldwide pandemic also contributed to this overall challenge, difficulties, and fatigue. However, the process enhanced my research skills, knowledge and insight into this topic as well as academic writing as a whole.

Moreover, having been in a similar selection process to the one discussed and studied, this study challenged me to be aware of and bracket my subjectivity, preconceived ideas, and biases. This was necessary to ensure objectivity when interpreting results.

Preface

This mini-dissertation was written in article format, following the guidelines and requirements set out by the North-West University Manual for Master's and Doctoral Studies, in adherence to the article model provided. Chapter One and Three comply with the style and referencing format stipulated by the American Psychological Association (APA 7th edition). Chapter Two was structured and written in compliance with the guidelines set out by the *South African Journal of Psychology*. Furthermore, the reference list for Chapter Two has also been formatted in adherence to APA 7th edition.

The South African Journal of Psychology is the academic and peer-reviewed journal proposed for the publication of the completed article submitted.

This mini-dissertation comprises of three chapters. Chapter One outlines an in-depth literature review of the relevant literature surrounding the topic researched, in order to provide the reader with the necessary contextualisation of the research. Chapter Two consists of the article that could possibly be submitted to the *South African Journal of Psychology* for publication. Lastly, Chapter Three provides the reader with a critical self-reflection regarding this research process.

The COMPRES Committee (The Community Psychosocial Research Committee), as part of the Health Sciences faculty at the North-West University, provided Scientific approval and clearance for this study. Ethical clearance and approval for this study was obtained by the Human Research Ethics Committee (HREC) at the North-West University (Addendum A). Furthermore, the Research Data Gatekeepers Committee provided the research with clearance to obtain and use the necessary archival data for the study. All three chapters of this mini-dissertation was language edited through Simone Barroso (Addendum B). This editor is accredited through South African Translators' Institute (SATI) and the Professional Editors

Group (PEG) as an accredited language practitioner. This manuscript has been submitted through Turnitin.

This mini-dissertation forms part of the requirements for the completion of the Master of Arts programme in Clinical Psychology at the North-West University and has been supervised through the study leader, Dr Ruan Spies and the co-supervisor, Mrs Heleen Coetzee.

PERMISSION LETTER FROM SUPERVISOR

I, the undersigned and supervisor of this study and co-author of the journal manuscript, hereby declare that the mini-dissertation completed by Robyn Derwin, does reflect the research regarding the subject matter and is her own work. Permission is granted that she may submit the manuscript for examination purposes and confirm that the mini-dissertation submitted is in partial fulfilment of the requirements for the degree Master of Arts in Clinical Psychology at the Potchefstroom Campus of the North West University.



Dr Ruan Spies

Date: 09/10/2021

DECLARATION BY RESEARCHER

I, Robyn Derwin, hereby declare that this manuscript, titled, *Assessing the predictive strength of a Clinical/Counselling Psychology Master's degree selection process*, is my own work and has not previously been submitted for examination. I declare that all sources of information utilised in this critical review have been referenced. Furthermore, I declare that this manuscript was submitted to the Turnitin software system and a satisfactory report was received with regard to plagiarism.



Date: 10/09/2021

Robyn Derwin

Student Number: 35034637

Chapter 1

Defining key concepts and terminology

The aim of this section is to give the reader a clear understanding and clarity of key concepts and terminology used throughout chapter 1 and chapter 2.

- **Good psychologist** - those who possess the attributes identified in the selection criteria (participating university, 2018) which will help the practitioner to build stronger working alliances with their clients (Ackerman & Hilsenroth, 2003; Horvath, Del Re, Flückiger, & Symonds, 2011; Jennings & Skovholt, 1999; Jennings et al., 2003; Lambert & Barley, 2001).
- **Child psychopathology module (CP)** - The aim of the child psychopathology course module is to make students competent (in both theory and practice) in the area of child and adolescent psychology and includes development, psychopathology, psycho-diagnostics, and evaluations (clinical, emotional and neuro-psychological). This involves being competent in clinical diagnosis, identifying normal and abnormal development, and lastly, planning and implementing suitable and effective psychological interventions. This module, therefore, serves as the basis from which these future psychologists are able to effectively provide psychotherapy to children and adolescents and effectively integrate metaphors into their interventions.
- **Theory of psychological interventions module (ToPI)** – The aim of the ToPI module is to teach students several therapeutic approaches, the theory behind these approaches, as well as how to conceptualise and formulate an intervention using these therapeutic approaches. Furthermore, it provides students with the knowledge and insight on how to apply these interventions skillfully, ethically, and effectively in diverse contexts when providing both short- and long-term psychotherapy.

- **Ethics and practical work module (EP)** - The aim of the EP module is to provide students with information and insight into ethical conduct, psychodiagnostics, as well as psychometric evaluations. Furthermore, students are trained in managing patients clinically and ethically and writing reports that provide appropriate clinical feedback on the suggested treatment and progress to multi-disciplinary teams. This module is assessed through the presentation of clinical cases which the students themselves have overseen. These cases are presented through the use of a written report that includes client history, background information, clinical diagnoses, psychological formulation, and treatment conducted as well as recommendations for further treatment. Additionally, the student then presents the case to a panel of evaluators who ask the student relevant questions to gain more knowledge regarding the case and the student's psychological insight into the case they have presented.
- **Applied and community psychology module (ACP)** - The ACP module aims to teach students the principles of community psychology and how to implement appropriate interventions in communities and diverse settings. Furthermore, it equips students with the ability to encourage both primary and secondary psychological wellbeing with various interventions to treat both individual psychopathology and psychological problems in the community as a whole. Lastly, the aim of ACP is to teach students how to offer advice that is grounded in psychological theory to policymakers on the development and implementation of new policies in a number of sectors.
- **Neuropsychology, psychopharmacology and psychopathology module (NPP)** – NPP is aimed at enabling students to relate and use information regarding neurophysiology, neuroanatomy, and psychopharmacology to assess the neuropsychological functioning and psychopathology of clients. Furthermore, it

provides students with insight into the relationship between the functioning of the brain and overall behaviour. It emphasises a scientific manner of thinking and encourages students to create and test hypotheses regarding this brain-behaviour relationship. Students are expected to be able to write reports on these hypotheses and evaluations and present feedback based on their neuropsychological insights. Lastly, this course has a focus on the student's ability to clinically diagnose psychopathology, explain and link diagnostic and associated features of the disorders, as well as explain risk, protective, and prognostic characteristics and the effects of disorders on an individual's functioning.

Literature Review

The selection for master's degree programmes in clinical and counselling psychology is a long, rigorous, and methodical process. Although each university in South Africa that offers training in these programmes has its own selection process, they all share similar selection procedures (Mayekiso et al., 2004). These commonalities in procedures include an appraisal of an honours degree in psychology for which the applicant received an average of at least 60% to 65%, personality traits and interpersonal skills required for the demands of being a psychologist, as well as involvement within their communities (Mayekiso et al., 2004; participating university, 2020, p.40-42).

The selection for these psychology master's degree programmes includes two processes. The first is a paper application that all applicants complete. This paper application includes basic biographical information, academic records, work experience, previous selections that the applicant may have attended, a biographical self-reflection, as well as personal details of two referees. Applicants are selected from this paper application and invited for a selection week held at the university, which is the second process.

Applicants who are invited for the selection week at the university, participate and are quantitatively scored on six different activities. The participating university (2020) cites these as a problem-solving task, a metaphors activity, a case study, a research task, as well as an initial interview. These scores are then amalgamated to one score, and the top applicants are short-listed and undergo a final interview with the entire selection panel. Each member on the selection panel then rates the applicant. The top-ranked applicants are then selected for their relevant programmes (clinical or counselling psychology).

Each of the abovementioned activities is set to assess whether or not the applicants possess the relevant competencies in terms of psychological insight, interpersonal skills,

academic ability, and overall potential to complete the master's training and be successful as a psychologist. Although all these activities are used to assess the overall potential of the candidate, the rationales for the inclusion of each of these activities in the selection differ slightly.

According to the participating university (2018), the initial interview is included in order for the selection panel to determine the candidates' strengths and weaknesses, how they manage anxiety, pressure, and crises, their interaction style, whether they have self-insight and effective self-regulation, how their family members have impacted their psychological functioning, the closeness and distance that exists in their current relationships, and gather more information regarding their life experiences from their autobiographical story. In contrast, the participating university (2021) states that the final interview, which is conducted by a panel of internal staff members and external psychologists, is used to answer final questions the panellists may have regarding the candidates' suitability for the programme and their potential to complete the programme successfully and become a psychologist.

The inclusion of the case studies is rationalised by the participating university (2021) as a means to assess the candidates' ability to think and reason analytically. Furthermore, it allows the selection panel to observe the candidates' thinking preferences and style. The problem-solving task assesses whether the candidate is able to handle new situations when they are not provided with information, prerequisites, or rules (participating university, 2018). Furthermore, it is included to evaluate how the candidate makes decisions, solves problems, and investigates the role self-insight and group interaction play in problem-solving (participating university, 2018).

Problem-solving and critical analysis can be seen as crucial skills for a psychologist to possess. Critical analysis and problem-solving are considered to be two of the essential skills

that should be developed in undergraduate psychology courses (Barrie, 2006) and are seen as essential graduate skills (O'Hare & McGuinness, 2005). The ability to think critically is also an essential skill in problem-solving (Heppner et al., 2001). These skills help to develop and improve a student psychologist's ability to link their theoretical knowledge to clinical practice (Boud & Falchikov, 2006) and increase their ability to manage problems that are new and ill-defined (Thomas, 2011). According to the Department of Higher Education and Training and the South African Qualifications Authority, a master's degree is an NQF level 9 qualification (SAQA, 2021). Based on Bloom's taxonomy of educational objectives (Anderson, Krathwohl, & Airasian et al., 2001), this level of teaching and learning estimates that students need to engage in at least 80% higher-order thinking activities during their training. This includes analysis, evaluation, and creation of knowledge – aspects that demand cognitive skills associated with problem-solving.

Psychologists can be regarded as problem solvers, as they are tasked with creating different and suitable treatment plans for patients who will present with unique, intricate, and multifaceted problems (Rotter, 1978). Therapist problem-solving includes the ability to identify various reasons for the patient's current emotions and behaviours and identify the differences in patient presentation (Rotter, 1978). Furthermore, problem-solving can be seen in clinical practice when psychologists formulate and test hypotheses regarding patients in order to answer questions relating to their past and current presentations (Karantzas et al., 2013). Additionally, the therapist is tasked with helping the patient to enhance their own problem-solving capabilities (Rotter, 1978; Heppner et al., 2001).

Problem-solving, as well as critical analysis, can be enhanced through the use of problem-based learning (PBL) (Searight & Searight, 2009; Karantzas et al., 2013). PBL refers to a method of teaching wherein students are provided with case studies or problem-based tasks that centre on multifaceted problems that do not have one clear-cut answer

(Karantzas et al., 2013). In PBL, students are able to link coursework material and theoretical knowledge to real-life clinical cases and problems (Searight & Searight, 2009). Furthermore, it has been shown that students are better able to learn and remember theoretical knowledge when they are able to apply it to challenging and practical problems (Searight & Searight, 2009). Lastly, PBL encourages students to work with other students so that they reflect not only on their own problem-solving skills but also that of their fellow students (Searight & Searight, 2009).

In contrast, the participating university (2021) states that the metaphors activity is included to assess how candidates can creatively project aspects of themselves onto an object while managing similarities and differences within a group. Additionally, this activity is also used to evaluate how the candidate handles the various group dynamics and interactions (participating university, 2018).

Given the above rationalisation for the metaphors activity, metaphors are often used in psychotherapy as a tool. According to the Collins English Dictionary (Collins Dictionaries, 2009) a metaphor is a “figure of speech in which a word or phrase is applied to an object or action that it does not literally denote in order to imply a resemblance” (p.1040). According to Legowski and Brownlee (2001), the crucial aspect of using metaphors in psychotherapy exists in the “transfer of meaning” (Legowski & Brownlee, 2001, p.20), which develops the ability to connect different ideas and expand one’s imagination to perceiving new realms of possibility. The use of metaphors allows one to transcend language and can be applied to emotions, behaviours, play, and thoughts, among others (Gordon, 2018). Metaphors can therefore be incorporated into different modalities used in both adult and child psychotherapy (Gordon, 2018).

Metaphors can be used for several different reasons in psychotherapy, depending on the psychologist's preferred theoretical orientation (Bowman, 1995; Pernicano, 2014). Some examples of the use of metaphors include discovering, constructing, or altering meanings and/or individual narratives, altering behaviour, inducing moments of insight, and decreasing a client's defences and resistance to therapy, and it can also be used to provide examples of different ideas and constructs, among others (Pernicano, 2014).

The use of metaphors has also been proven useful, especially in the exploration of client's metaphors, in helping to create and foster a good working alliance between the psychologist and client (Sims, 2003). This working alliance is often the catalyst for change within the client (Ackerman & Hilsenroth, 2003) and therefore crucial for the success of psychotherapy. Additionally, the use of metaphors can help improve a client's self-insight (Pernicano, 2014).

Lastly, the research activity provides an indication of the candidates' level of research skills and abilities in terms of identifying a research problem and being able to adequately align it with a justifiable research design and methodology (participating university, 2018).

Creswell (2009) provides a general outline of these basic research skills, which include the ability to recognise a research problem, evaluate and review literature on the topic, use the available literature and problem to formulate an appropriate research question, gather the necessary data, and analyse and interpret the data before effectively disseminating the results. According to Clark and Sousa (2017), five essential skills qualitative researchers need are the ability to work well with others, create and write excellent grants, have an in-depth knowledge of the relevant literature, publish research in mainstream journals, and lastly, appropriately share their work with the relevant communities. Similar and additional skills required for researchers include a substantial knowledge of literature that is used to

attain a detailed background and understanding of the topic under investigation, understanding of the appropriate methodology, and the ability to communicate their research effectively both in writing and verbally (Alm, 2010; Strnadová et al., 2013).

Overall, it can thus be stated that researchers must have the ability to acquire the necessary literature on a topic in order to attain a detailed background and formulate an appropriate research question. Additionally, researchers must be able to synthesise and integrate reviewed literature with data collected in order to draw conclusions regarding their hypotheses.

These research skills are, furthermore, crucial for the success of the student during their M1 year, as the research module is where these skills are mostly utilised and which makes up 50% of the overall coursework average. Therefore, a student who possesses and cultivates these skills through their research module in their M1 year will perform substantially better in their overall coursework average compared to a student who either does not possess these skills or does not enhance them throughout their master's degree.

The abovementioned selection of activities and similar ones have been used throughout South African universities in their selection procedures for these master's degrees and thus have been used extensively in selecting future psychologists. However, according to acquired literature, the extent to which these selection activities accurately predict which applicants will be successful as a psychologist is unknown. Therefore, this study is aimed at assessing the predictive strength of this selection process.

Characteristics that have been used to describe “good” psychologists, or those with the potential to become good psychologists, include psychological-mindedness and insight, good interpersonal and relational skills, maturity, congruence, stress management, and a desire for continuous education and training (Jennings & Skovholt, 1999; Mayekiso et al.,

2004). According to a meta-analysis performed by Ackerman and Hilsenroth (2003), a psychologist who is able to build a good therapeutic alliance with their client has certain personal characteristics. These include flexibility, confidence, a friendly and warm nature, openness, trustworthiness, as well as honesty and respectfulness (Ackerman & Hilsenroth, 2003). Jennings and Skovholt (1999) further divided these attributes into three different domains, namely the cognitive, emotional, and relational domains.

Similar domains and characteristics have been identified in individuals who were considered to be expert or “master” therapists (as rated by their peers). The characteristics of “expert psychotherapists” in Singapore have been identified and divided into four categories (Jennings et al., 2008). These categories are (1) personal characteristics, (2) approach to practice, (3) developmental influences, and (4) ongoing professional growth (Jennings et al., 2008).

Those individuals with the personal characteristics of empathy, respect, and a non-judgemental nature were identified in “master therapists” (Jennings et al., 2008). These characteristics were deemed important, as they contributed to the development of a safe therapeutic space for clients (Jennings et al., 2008). This can be seen to reflect the emotional and relational domains identified by Jennings and Skovholt (1999).

Factors involved in the therapist’s approach to practice included a flexible therapeutic stance, the ability to identify the balance between support and challenge in therapy, build a therapeutic relationship, and embrace and work in a multi-cultural environment (Jennings et al., 2008). These factors reflect the cognitive domain (Jennings & Skovholt, 1999) previously identified, as they demonstrate how a therapist is able to apply their theoretical knowledge in therapy and be avid problem solvers. Additionally, it shows the importance of the ability to

build a working/therapeutic alliance with their clients and competence in working with multiple cultures – an issue that is prevalent in South Africa (Pillay et al., 2013).

Developmental influences that were identified in “master psychotherapists” included both personal and professional experience, being self-aware regarding one’s own strengths and weaknesses, as well as humility and doubt, which were linked to an increase in motivation (Jennings et al., 2008). These characteristics can be linked to the emotional domain of Jennings and Skovholt (1999), as they reflect self-insight as well as maturity and personal growth (linked to their life experiences).

Lastly, ongoing professional growth reflects the ongoing development of the psychotherapist through continuous education and training (Jennings et al., 2008). This aspect can be seen in those characterised as avid learners, as identified by Jennings and Skovholt (1999).

Jennings and colleagues (2003) investigated further variables which contribute to the development of expertise in therapy and counselling; they found that expertise was not only limited to the experience of the counsellor or therapist but also a multitude of other factors (Jennings et al., 2003). These factors included the personal characteristics of the therapist (relational as well as emotional characteristics with an emphasis on openness to change), an understanding of how culture influences individuals, and lastly, the therapist’s being content with ambiguity (Jennings et al., 2003).

In order to determine whether the studied selection process not only selects candidates who are considered to be good students but also those who have the potential to be good practitioners (Mayekiso et al., 2004), seven outcomes were measured. “Good practitioners” are defined as those who possess the attributes identified in the selection criteria at the participating university (2018), which will help the practitioner to build stronger working

alliances with their clients (Ackerman & Hilsenroth, 2003; Horvath, Del Re, Flückiger, & Symonds, 2011; Jennings & Skovholt, 1999; Jennings et al., 2003; Lambert & Barley, 2001). These outcomes are included the selected students' coursework average and theoretical course modules for their M1 year and their practical module (EP) marks from their M1 year. The coursework average of the M1 students reflects whether or not the student is considered a "good student" (Mayekiso et al., 2004), whereas the practical components in the M1 year reflect whether or not the student is considered a "good practitioner" (Mayekiso et al., 2004).

Additionally, these two outcomes (M1 course modules and practical module) have been chosen since they reflect the three domains (cognitive, emotional, and relational) identified by Jennings and Skovholt (1999). The coursework average of the student will reflect the cognitive domain, assessing the ability of the student to succeed academically and obtain new theoretical understandings which can then be successfully and skilfully applied in therapy. The practical module of the student will reflect the emotional and relational domains. These domains include aspects such as emotional receptivity, maturity, flexibility, empathy, openness, and interpersonal skills attributes, which are important in developing a working alliance between a psychologist and a client (Ackerman & Hilsenroth, 2003). The practical module of the M1 year comprises two case presentations on how the student has conducted therapy with clients. This outcome measure was chosen to assess these domains, as building a strong alliance with a client positively influences therapeutic change within the client (Horvath et al., 2011) and can thus be said to be important in influencing and carrying out "good" and successful therapy (Castonguay et al., 2006).

In terms of this research, a "good" psychologist is defined as a psychologist who can effectively help or guide a client towards therapeutic change – an important aspect of therapy (Goldfried & Davila, 2005; Goldfried, 2013). According to previous research (Castonguay et al., 2006; Hersoug et al., 2001; Horvath et al., 2011; Lambert & Barley, 2001), therapeutic

change has been observed to be heavily influenced by the working alliance that is created and maintained between the psychologist and the client. A working alliance is defined as a collaborative relationship between the psychologist and the client that fosters the attainment of therapeutic goals and objectives (Luborsky, 1976 as cited in Horvath et al., 2011; Bordin, 1994 as cited in Horvath et al., 2011). This alliance is built upon the client's willingness and investment in the therapeutic process as well as on various personal characteristics of the psychologist which enable a warm, nurturing, and supportive therapeutic environment (Luborsky, 1976 as cited in Horvath et al., 2011). A working alliance is not limited to one particular type of psychotherapy or intervention but rather is dependent on how the psychologist interacts with and understands the client (Horvath et al., 2011).

Horvath and colleagues (2011) have demonstrated that a psychologist who is able to create a positive working alliance with their client has certain personal characteristics and abilities. These include a warm nature, being supportive, and the ability to establish a caring and empathetic relationship (Horvath et al., 2011). A psychologist who demonstrates these and other characteristics such as openness, congruence, trustworthiness, and confidence (Ackerman & Hilsenroth, 2003; Lambert & Barley, 2001) is able to create a secure relationship with their client that enables therapy to begin and buffer possible ruptures in the alliance (Castonguay et al., 2006; Hersoug et al., 2001; Sullivan et al., 2005). As can be seen from the above literature, these attributes are the same or similar to those identified by Jennings and Skovholt (1999) in the cognitive, relational, and emotional domains. Therefore, it is evident that aspects of the abovementioned domains are important in building and maintaining a therapeutic alliance between the psychologist and the client.

Furthermore, these three domains are present in the selection activities used to assess candidates. For instance, the cognitive domain is assessed in the research, problem-solving, and case study activities. These activities assess the current theoretical knowledge and skills

of the candidate, their ability to think and reason analytically, as well as how choices are made and problems are solved. Both the emotional and relational domains are present in the interviews, the problem-solving task, and the metaphors activity (participating university, 2018). These activities can be seen to evaluate aspects of these domains such as the candidates' flexibility (e.g. managing unknown and new situations, handling differences and similarities in groups), interpersonal skills (e.g. relationships, interaction style, managing group dynamics and interactions), maturity (e.g. life experience from their own life story, management of anxiety, pressure and crises), self-insight (e.g. self-regulation, strengths and weaknesses, projection of the self), empathy, and openness (e.g. group interactions) (participating university, 2018).

Therefore, these attributes and overall domains identified in previous literature (Ackerman & Hilsenroth, 2003; Jennings & Skovholt, 1999; Jennings et al., 2003; Jennings et al., 2008; Mayekiso et al., 2004) form a substantial basis for the selection criteria across the universities. Additional elements such as personal history, experience, and community involvement are also considered in the selection (Mayekiso et al., 2004).

To date, no research has attempted to evaluate the predictive strength of a psychology master's degree selection process. This predictive strength refers to evaluating whether or not this process accurately selects candidates with the potential to become "good" psychologists in terms of the selected attributes. Evaluating the predictive strength of various selection activities is important, as this process can be considered a vital and first aspect of training psychologists and, as such, is an initial step towards delivering mental health care to our communities (Fisher et al., 2003 as cited in Mayekiso et al., 2004).

According to Stats SA (2019), in 2018 there was approximately one psychologist for every 6 586 people. This statistic shows just how important it is for universities to correctly

select candidates who will become good psychologists, in the extent to which they are able to address the needs of the South African population. If universities are unable to do so and select candidates who are either unable to complete the degree or register as a psychologist with the HPCSA or who do not continue to practice as a psychologist, this already shocking statistic may increase which will lead to the South African population being further disadvantaged.

Moreover, a large proportion of the South African population already does not have access to mental health resources. There has, therefore, been a call for the transformation of psychology in South Africa to promote community-based interventions in order to make mental health resources more accessible, especially to disadvantaged communities (Pillay et al., 2013). A large part of this transformation in psychology includes selecting master's candidates who possess the relevant skills and aptitudes to carry out community-based interventions which are able to address the desperate need for mental health resources in South Africa and issues surrounding social inequality (not only serving the more privileged population) and racial oppression (Pillay et al., 2013).

The master's degrees in clinical and counselling psychology receive applications which far outweigh the number of spaces available (Pillay et al., 2013) and therefore, the majority of applications are declined. Consequently, most candidates are not able to become registered clinical or counselling psychologists, which alters their career plans and affects their career possibilities. Moreover, the selection processes require emotional, mental, and financial resources from an applicant (Ed, 2016) and costs for the university to conduct (in terms of time and resources). It is therefore imperative to evaluate to what extent the selection process predicts important outcomes in the master's degree.

Lastly, given that the selection process and criteria in South Africa differ slightly between the universities, the same applicant may be rejected from some universities but accepted by others. For this reason, there is uncertainty among applicants as to what is required to be selected into a clinical or counselling psychology master's programme. Findings from this study regarding the predictive strength of this process can help to inform the development of a more rigorous selection process.

Aims and objectives

This study aimed to determine the nature of the relationships between the selection activities and the performance measures as well as the relationships between the set of selection activities and performance variables. Additionally, it aimed to determine which (if any) selection activities accurately predict the outcome-variable performance measures.

Research questions

In order to meet the aims of this proposed research study, the following questions were addressed:

1. What are the relationships between each of the input measures (selection activities) and each of the outcome variables (performance measures)?
2. Which input measures accurately predict the outcome variables (performance measures)?
3. What is the relationship between the set of input measures (selection activities) and the set of outcome variables (performance measures)?

Hypotheses

1. The research, problem-solving, and case-study selection activities will have a positive correlation with the coursework average of the participant.

2. The problem-solving and metaphors selection activities and the interviews (initial and final) will have a positive correlation with both practical module marks.
3. The research, problem-solving, and case-study selection activities will predict the coursework average of the participant.
4. The problem-solving and metaphors selection activities and the interviews (initial and final) will predict both practical module marks of the participant.

Chapter One Reference List

- Ackerman, S., & Hilsenroth, M. (2003). A review of therapist characteristics and techniques positively impacting the therapeutic alliance. *Clinical Psychology Review*, 23(1), 1-33. [https://doi.org/10.1016/s0272-7358\(02\)00146-0](https://doi.org/10.1016/s0272-7358(02)00146-0)
- Alm, N. (2010). Invited commentary on Bigby & Frawley's reflections on the challenges of doing inclusive research as part of the "Making Life Good in the Community" study. *Journal Of Intellectual & Developmental Disability*, 35(2), 62-63. <https://doi.org/10.3109/13668251003726846>
- Anderson, L., Bloom, B., & Krathwohl, D. (2001). *A taxonomy for learning, teaching, and assessing. A Revision of Bloom's Taxonomy of Educational Objectives*. Longman.
- Andrew, G., Arora, R., Bilmes, J., & Livescu, K. (2013). Deep canonical correlation analysis. In International conference on machine learning (pp. 1247-1255). PMLR. <https://doi.org/10.5555/3042817.3043076>
- Banerjee, A., & Chaudhury, S. (2010). Statistics without tears: Populations and samples. *Industrial Psychiatry Journal*, 19(1), 60. <https://doi.org/10.4103/0972-6748.77642>
- Barrie, S. (2006). Understanding What We Mean by the Generic Attributes of Graduates. *Higher Education*, 51(2), 215-241. <https://doi.org/10.1007/s10734-004-6384-7>
- Boud, D., & Falchikov, N. (2006). Aligning assessment with long-term learning. *Assessment & Evaluation In Higher Education*, 31(4), 399-413. <https://doi.org/10.1080/02602930600679050>
- Bowman, R. P. (1995). Using metaphors as tools for counseling children. *Elementary School Guidance & Counseling*, 29(3), 206-216. Retrived from <https://www-jstor->

org.nwulib.nwu.ac.za/stable/pdf/42871167.pdf?casa_token=hThkjuc7MkQAAAAA:C8rOpc4DkhEexiYDb4fZ91tKzFq_dh4OxGvMVPXzMeffbLnuShpZLrcN97gVhyOs2IeJUzifolvHkbD8b1iDMkvkbY3rRSk28beqC2D_VB2rNnTMDg

Castonguay, L., Constantino, M., & Holtforth, M. (2006). The working alliance: Where are we and where should we go?. *Psychotherapy: Theory, Research, Practice, Training*, 43(3), 271-279. <https://doi.org/10.1037/0033-3204.43.3.271>

Clark, A., & Sousa, B. (2017). The Five Neglected Skills All Qualitative Researchers Need. *International Journal Of Qualitative Methods*, 16(1), 160940691771341. <https://doi.org/10.1177/1609406917713418>

Collins Dictionaries. (2009). Metaphor. *Collins English Dictionary* (10th ed., p. 1040). HarperCollins UK.

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Sage Publications, Inc.

Department of Justice. (2001, March, 9). Promotion Of Access To Information Act, 2000 Regulations Relating To The Promotion Of Access To Information, Regulation Gazette (No.7024). Government Gazette, Vol. 428.

Drucker, J. (1994). *Constructing metaphors: the role of symbolization in the treatment of children*. In A. Slade & D. P. Wolf (Eds.), *In Children at play: Clinical and developmental approaches to meaning and representation* (pp. 62–80). Oxford University press.

Durrheim, K., & Tredoux, C. (2004). *Numbers, hypotheses & conclusions: A course in statistics for the social sciences*. Juta and Company Ltd.

Ed, P. (2016). Psychology Master's Selection and Employment... prospects in the field of Psychology - PsyTalk. Retrieved 8 March 2020, from

<http://psytalk.psyssa.com/psychology-Master's-selection-employment-prospects-field-psychology/>

Etikan, I., Musa, S., & Alkassim, R. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal Of Theoretical And Applied Statistics*, 5(1), 1.

<https://doi.org/10.11648/j.ajtas.20160501.11>

Field, A. (2009). Discovering statistics using IBM SPSS statistics (3rd ed., p. 821). Sage Publications.

Gelo, O., Braakmann, D., & Benetka, G. (2008). Quantitative and Qualitative Research: Beyond the Debate. *Integrative Psychological And Behavioral Science*, 42(3), 266-

290. <https://doi.org/10.1007/s12124-008-9078-3>

Genuchi, M., Hopper, B., & Morrison, C. (2016). Using Metaphors to Facilitate Exploration of Emotional Content in Counseling With College Men. *The Journal Of Men's*

Studies, 25(2), (133-149). <https://doi.org/10.1177/1060826516661187>

Goldfried, M., & Davila, J. (2005). The role of relationship and technique in therapeutic change. *Psychotherapy: Theory, Research, Practice, Training*, 42(4), 421-430.

<https://doi.org/10.1037/0033-3204.42.4.421>

Goldfried, M. (2013). What should we expect from psychotherapy?. *Clinical Psychology Review*, 33(7), 862-869. <https://doi.org/10.1016/j.cpr.2013.05.003>

Gordon, T. J. (2018). Utilizing animal metaphors in child psychotherapy: an integrative approach for therapists. *The Graduate Review*, 3(1), 135-

148. https://vc.bridgew.edu/cgi/viewcontent.cgi?article=1072&context=grad_rev

- Hardoon, D., Szedmak, S., & Shawe-Taylor, J. (2004). Canonical Correlation Analysis: An overview with application to learning methods. *Neural Computation*, 16(12), 2639-2664. <https://doi.org/10.1162/0899766042321814>
- Health Professions Council of South Africa (HPCSA). (2019a). The board of psychology. Minimum standards for the training of clinical psychology. Retrieved from https://www.hpcsa.co.za/Uploads/PSB_2019/Policy%20and%20Guidelines/SGB%20CLIN%20-%20Revised%20October%202019.pdf
- Health Professions Council of South Africa (HPCSA). (2019b). The board of psychology. Minimum standards for the training of counselling psychology. Retrieved from https://www.hpcsa.co.za/Uploads/PSB_2019/Policy%20and%20Guidelines/SGB%20COUNS%20-%20Revised%20October%202019.pdf
- Heppner, P., Cooper, C., Mulholland, A., & Wei, M. (2001). A brief, multidimensional, problem-solving psychotherapy outcome measure. *Journal Of Counseling Psychology*, 48(3), 330-343. <https://doi.org/10.1037/0022-0167.48.3.330>
- Horvath, A., Del Re, A., Flückiger, C., & Symonds, D. (2011). Alliance in individual psychotherapy. *Psychotherapy*, 48(1), 9-16. <https://doi.org/10.1037/a0022186>
- Jennings, L., & Skovholt, T. (1999). The cognitive, emotional, and relational characteristics of master therapists. *Journal Of Counseling Psychology*, 46(1), 3-11. <https://doi.org/10.1037/0022-0167.46.1.3>
- Jennings, L., D'Rozario, V., Goh, M., Sovereign, A., Brogger, M., & Skovholt, T. (2008). Psychotherapy expertise in Singapore: A qualitative investigation. *Psychotherapy Research*, 18(5), 508-522. <https://doi.org/10.1080/10503300802189782>

- Jennings, L., Goh, M., Skovholt, T., Hanson, M., & Banerjee-Stevens, D. (2003). Multiple factors in the development of the expert counsellor and therapist. *Journal Of Career Development*, 30(1), 59-72. <https://doi.org/10.1177/089484530303000104>
- Karantzas, G., Avery, M., Macfarlane, S., Mussap, A., Tooley, G., Hazelwood, Z., & Fitness, J. (2013). Enhancing critical analysis and problem-solving skills in undergraduate psychology: An evaluation of a collaborative learning and problem-based learning approach. *Australian Journal Of Psychology*, 65(1), 38-45. <https://doi.org/10.1111/ajpy.12009>
- Kim, Y., Kim, T., & Ergün, T. (2015). The instability of the Pearson correlation coefficient in the presence of coincidental outliers. *Finance Research Letters*, 13, 243-257. <https://doi.org/10.1016/j.frl.2014.12.005>
- Kopp, R., & Craw, M. (1998). Metaphoric language, metaphoric cognition, and cognitive therapy. *Psychotherapy: Theory, Research, Practice, Training*, 35(3), 306-311. <https://doi.org/10.1037/h0087795>
- Kruger, D., & Swanepoel, M. (2017). Glueing the pieces together: Female adolescents' construction of meaning through digital metaphoric imagery in trauma therapy. *The Arts In Psychotherapy*, 54, 92-104. <https://doi.org/10.1016/j.aip.2017.04.011>
- Legowski, T., & Brownlee, K. (2001). Working with Metaphor in Narrative Therapy. *Journal Of Family Psychotherapy*, 12(1), 19-28. https://doi.org/10.1300/j085v12n01_02
- McKelley, R. A. (2014). Pushing haystacks and cracking steel balls: Using metaphors with men.

- Mayekiso, T., Strydom, F., Jithoo, V., & Katz, L. (2004). Creating new capacity through postgraduate selection. *South African Journal Of Psychology*, 34(4), 657-671.
<https://doi.org/10.1177/008124630403400409>
- Participating University. (2018). M SELECTION: OUTLINED RATIONALE AND CRITERIA.
- Participating University. (2021). Faculty of Health Sciences: Postgraduate Yearbook.
- O'Hare, L., & McGuinness, C. (2005). Skills and Attributes Developed by Psychology Undergraduates: Ratings by Undergraduates, Postgraduates, Academic Psychologists and Professional Practitioners. *Psychology Learning & Teaching*, 4(1), 35-42.
<https://doi.org/10.2304/plat.2004.4.1.35>
- Pernicano (2014). *Using trauma-focused therapy stories: Interventions for therapists, children and their caregivers*. New York: Routledge.
- Pernicano, P. (2015). Using therapy stories and metaphor in child and family treatment. *Liana Lowenstein Newsletter*.
- Pillay, A., Ahmed, R., & Bawa, U. (2013). Clinical psychology training in South Africa: A call to action. *South African Journal Of Psychology*, 43(1), 46-58.
<https://doi.org/10.1177/0081246312474411>
- Rabinowitz, F. E., & Cochran, S. V. (2002). *Deepening psychotherapy with men*. American Psychological Association.
- Raskin, J. (1999). METAPHORS AND MEANING: CONSTRUCTING THE CREATIVE PSYCHOTHERAPIST. *Journal Of Constructivist Psychology*, 12(4), 331-347.
<https://doi.org/10.1080/107205399266046>

- Rosnow, R.L., & Rosenthal, R. (2005). *Beginning behavioral research: A conceptual primer* (5th Ed.). Pearson Prentice Hall
- Rotter, J. (1978). Generalized expectancies for problem solving and psychotherapy. *Cognitive Therapy And Research*, 2(1), 1-10. <https://doi.org/10.1007/bf01172508>
- SAQA. (2021). *National Qualifications Framework. Sub-frameworks and Qualification Types*. Department of Higher Education and Training.
- Searight, H., & Searight, B. (2009). Implementing Problem-Based Learning in an Undergraduate Psychology Course. *Insight: A Journal Of Scholarly Teaching*, 4, 69-76. <https://doi.org/10.46504/04200906se>
- Sedgwick, P. (2012). Pearson's correlation coefficient. *BMJ*, 345(jul04 1), e4483-e4483. <https://doi.org/10.1136/bmj.e4483>
- Sims, P. (2003). Working with Metaphor. *American Journal Of Psychotherapy*, 57(4), 528-536. <https://doi.org/10.1176/appi.psychotherapy.2003.57.4.528>
- Snow, M. S., Ouzts, R., Martin, E. E., & Helm, H. (2005). Creative metaphors of life experiences seen in play therapy. *VISTAS Online no. Article*, 12, 63-65.
- Stats S.A. (2019). *Mid-Year Population Estimates*. Pretoria: Stats.
- Strnadová, I., Cumming, T., Knox, M., & Parmenter, T. (2013). Building an Inclusive Research Team: The Importance of Team Building and Skills Training. *Journal Of Applied Research In Intellectual Disabilities*, 27(1), 13-22. <https://doi.org/10.1111/jar.12076>
- Sullivan, M., Skovholt, T., & Jennings, L. (2005). Master Therapists' Construction of the Therapy Relationship. *Journal Of Mental Health Counseling*, 27(1), 48-70. <https://doi.org/10.17744/mehc.27.1.171ajdvw9muepht3>

- Thomas, T. (2011). Developing First Year Students' Critical Thinking Skills. *Asian Social Science*, 7(4). <https://doi.org/10.5539/ass.v7n4p26>
- Tongco, M. (2007). Purposive Sampling as a Tool for Informant Selection. *Ethnobotany Research And Applications*, 5, 147. <https://doi.org/10.17348/era.5.0.147-158>
- Wahlström, J. (2006). The narrative metaphor and the quest for integration in psychotherapy. *New approaches to integration in psychotherapy*, 38-49.
- Wickman, S., Daniels, M., White, L., & Fesmire, S. (1999). A "Primer" in Conceptual Metaphor for Counselors. *Journal Of Counseling & Development*, 77(4), 389-394. <https://doi.org/10.1002/j.1556-6676.1999.tb02464.x>
- Witztum, E., van der Hart, O., & Friedman, B. (1988). The use of metaphors in psychotherapy. *Journal Of Contemporary Psychotherapy*, 18(4), 270-290. <https://doi.org/10.1007/bf00946010>
- Zainal, Z. (2007). Case study as a research method. *Jurnal Kemanusiaan*, 5(1).

CHAPTER TWO

Article

Manuscript for Examination

Manuscript title, authors and contact details.

Behind the scenes – validity of the psychology master's degree selection

Main author

Robyn Derwin

32 Louanna Avenue

Constantia Kloof, Johannesburg

1709

Email: robz.dn@gmail.com

Co-authors

Dr Ruan Spies

North-West University - Potchefstroom

South Africa

Building E8 Office 121

Email: ruan.spies@nwu.ac.za

Mrs Heleen Coetzee

North-West University – Potchefstroom

South Africa

Building E8 Office 124

Email: Heleen.Coetzee@nwu.ac.za

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- Line spacing: Double Line Spacing is to be used throughout the text. A minimum of 3cm for left- and right-hand margins and 5cm at head and foot.
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Behind the scenes – validity of a psychology master’s degree selection

Abstract

The study’s aim was to assess the validity of a selection process for master’s degree programmes in clinical and counselling psychology at an undisclosed university in South Africa. This was achieved by completing correlation and regression analyses between the six selection activities, the six course modules, and the course average in the student’s M1 year. Results showed significant positive regressions between the metaphors activity, child psychopathology, and theory of psychological interventions modules, between the research task and neuropsychology, between the psychopharmacology and psychopathology modules, and between the problem-solving activity and the course average. The case study activity negatively predicted the ethics and practical work and applied and community psychology modules. The conclusion was that the selection process can be considered valid, as the skills assessed for most of the selection activities positively correlated and predicted the skills required to succeed both academically in the M1 year and as a practising psychologist. This indicates that this selection process selects candidates who are considered “good students” with the potential to be “good psychologists”. However, the case study activity required further investigation, as the skills that are purportedly assessed should correlate and positively predict the ethics and practical work module, which was not the case.

Keywords: Clinical psychology, counselling psychology, masters, selection, good psychologist

What defines a “good psychologist”? Is it specific attributes or skills? The ability to create a good working alliance? Or possibly the ability to induce therapeutic change for a client? The definition of a “good psychologist” varies widely due to the subjective nature of the therapeutic experience. Therefore, selecting candidates for a master’s degree in clinical or counselling psychology who have the potential to become “good psychologists” has often been subjective by nature, with each university in South Africa offering these programmes having slightly different selection processes.

For the purpose of this study, a “good psychologist” is defined as an individual with the ability to create a strong working alliance with clients which helps to induce therapeutic change (Ackerman & Hilsenroth, 2003). Attributes that assist a psychologist in doing so include self-awareness and regulation, analytical reasoning, critical thinking, creativity, problem-solving, good interpersonal skills, flexibility, research skills, maturity, honesty, openness, respectfulness, and a friendly nature (Ackerman & Hilsenroth, 2003; Horvath et al., 2011; Jennings & Skovholt, 1999; Jennings et al., 2003; Lambert & Barley, 2001). Additional characteristics which have been used to define a “good psychologist” include psychological mindedness, effective stress management, and continuous learning (Jennings & Skovholt, 1999; Mayekiso et al., 2004).

Jennings and Skovholt (1999) separated these skills and attributes into three domains, namely emotional, relational, and cognitive domains. A “good psychologist” can therefore be seen to have attributes, skills, and characteristics from each of these three domains.

These domains are assessed and sought after during the selection of candidates for clinical and counselling psychology master’s degree programmes at various universities in South Africa. This study focused on the selection process for these programmes at one unnamed university in South Africa – hereafter referred to as the “participating university” – to ensure anonymity. During selection at the participating university, skills and attributes from these domains are assessed through six selection activities – two interviews (initial and final), a metaphors task, a problem-solving task, a case study, and a research task (participating university, 2018). Together, these tasks aim to evaluate a candidate’s overall potential for success in the relevant programme and becoming a “good psychologist”, with each task assessing different attributes and skills. Although each university’s selection process differs, there is substantial degree of overlap and similarity between processes.

The initial interview assesses the candidate’s stress management, strengths and weaknesses, self-awareness, and interpersonal relationships and influences (participating university, 2018). The final interview provides the panel with a space to ask any final

questions required to help determine whether the candidate is suitable for the respective programme (participating university, 2018).

The case study is included to evaluate the candidate's critical thinking, analytical reasoning, and thinking style (participating university, 2018). The problem-solving task evaluates problem-solving skills, decision-making, and the ability to manage novel situations and group interactions (participating university, 2018).

Both critical thinking and problem-solving are essential skills for a psychologist and are developed throughout undergraduate and graduate studies (O'Hare & McGuinness, 2005; Barrie, 2006). These skills assist in applying theory to clinical work (Boud & Falchikov, 2006) and enhance one's capacity to handle novel and ambiguous problems (Thomas, 2011). Critical thinking and problem-solving are often enhanced in graduate degrees through the use of problem-based learning (PBL) (Searight & Searight, 2009; Karantzas et al., 2013). PBL requires students to link theory to clinical cases which often constitute complex problems and may have a multitude of solutions (Searight & Searight, 2009; Karantzas et al., 2013).

Furthermore, problem-solving is required when identifying contributing factors to a client's clinical presentation (Rotter, 1978) and when formulating individual treatment plans (Rotter, 1978; Karantzas et al., 2013). Lastly, clinicians require good problem-

solving capabilities as they are often tasked with enhancing a client's own problem-solving (Rotter, 1978; Heppner et al., 2001).

In contrast, the metaphors task evaluates the candidate's ability to creatively project themselves and their experiences onto an object while managing group interactions (participating university, 2018). In this activity, metaphors are used for numerous purposes in psychotherapy, such as creating and changing personal meanings and narratives, inducing intrapsychic insight, altering behaviour and emotions, and reducing a client's resistance to psychotherapy and their personal defences (Bowman, 1995; Pernicano, 2014). However, as Legowski and Brownless (2001) state, the importance of using metaphors in psychotherapy lies in the "transfer of meaning" (Legowski & Brownless, 2001, p.20), as it allows clients and therapists to relate ideas and experiences with each other and creates "a bridge to the client's inner world" (Kruger & Swanepoel, 2017, p.93) that opens up a client's imagination and allows them to perceive new possibilities and perspectives.

The research task evaluates the candidate's basic research skills, which involves identifying research problems and effectively aligning them with an appropriate research methodology (participating university, 2018). Further research skills include recognising research problems, investigating relevant literature, devising research questions,

collecting, analysing and interpreting data, and the ability to disseminate results effectively (Alm, 2010; Strnadová et al., 2013; Clark & Sousa, 2017).

Although each of these activities is set to assess skills that literature has identified to be crucial for a “good psychologist” to possess, the extent to which these activities accurately predict candidates who will be considered “good” and successful psychologists is unknown. This study was therefore aimed at assessing the validity in this process of selecting candidates who will not only be considered good students but also “good psychologists”.

To achieve the above aim, seven outcome measures were chosen which reflect the three domains (i.e. the emotional, relational, and cognitive domains) of a psychologist identified by Jennings and Skovholt (1999). These outcome measures include the course modules in the student’s M1 year of their respective degree. Five theoretical modules (child psychopathology, theory of psychological interventions, applied and community psychology, neuropsychology, psychopharmacology and psychopathology, and a research module), an ethics and practical work module, and lastly, a coursework average, which consists of 50% research and 50% combined average of the remaining five modules, are included in the programme. These courses reflect the minimum standards for the training of clinical and counselling psychology put forth by the Health Professionals Council of South Africa (HPCSA, 2019a; HPCSA, 2019b).

The cognitive domain of a psychologist is reflected in the five theoretical modules and coursework average, as these evaluate the student's ability to succeed academically and acquire the theoretical understandings needed to carry out successful psychotherapy. The relational and emotional domains are reflected in the ethics and practical module of the student, as skills such as maturity, emotional receptivity, openness, empathy, interpersonal skills, and flexibility form part of these domains and are attributes required to create a good and strong working alliance with a client in psychotherapy (Ackerman & Hilsenroth, 2003), which is considered essential in conducting successful psychotherapy (Castonguay et al., 2006).

Evaluating the validity of this process is important because it is the first step in choosing psychologists who deliver mental health care and resources to South African communities (Fisher et al., 2003 as cited in Mayekiso et al., 2004). A substantial number of these communities do not have access to mental health resources – Stats SA (2019) cites approximately one psychologist for every 6 568 people in South Africa. There has hence been a call for the transformation of psychology in South Africa to promote community-based interventions in order to make mental health resources more accessible, especially to disadvantaged communities (Pillay et al., 2013). This requires that universities select master's degree candidates who possess the relevant skills and aptitudes to carry out community-based interventions which are able to address the desperate need for mental health resources in South Africa and issues surrounding social inequality and racial

oppression (Pillay et al., 2013). Additionally, it is imperative that training universities carefully select candidates who will be able to complete their degrees, register as psychologists with the HPCSA and thereafter serve the South African population. If this is not the case, training universities may contribute to a growing statistic of psychologists per person in South Africa, further disadvantaging our communities.

Furthermore, the number of applications for these degrees far outweigh the number of spaces available (Pillay et al., 2013), and so most applicants are declined, which alters their career paths and employment possibilities. Lastly, these selection processes are costly to universities in terms of time and resources spent to conduct them and the mental, financial, and emotional resource costs for each candidate (Ed, 2016).

With this study, I intend to answer the following research questions: 1) What are the relationships between each of the selection activities and each of the performance measures? 2) Which selection activities accurately predict the performance measures? and 3) What is the relationship between the set of selection activities and the set of performance measures?

From these research questions, the following hypotheses were formulated: 1) The research, problem-solving and case-study selection activities will have a positive correlation with the coursework average of the participant. 2) The problem-solving and metaphors selection activities and the interviews (initial and final) will have a positive

correlation with both practical module marks of the participant. 3) The research, problem-solving and case-study selection activities will predict the coursework average of the participant. 4) The problem-solving and metaphors selection activities and the interviews (initial and final) will predict both practical module marks of the participant.

Method

Participants

In this study, the archival data from 81 participants, namely students enrolled for a master's degree in clinical or counselling psychology at an undisclosed university in South Africa over a six-year period was used. Given that the data for the study has been anonymised, no demographic information is available for the participants. Students who were accepted into the programmes but did not successfully complete their relative degrees were excluded from the study, as they were not able to meet the necessary outcome measures required for the study.

Procedure

Data collection

This data fell within two broad categories, namely selection activities and module marks. The selection activities were considered for the input variables, with the module marks

and course average being the output variables. There was a total of six selection activities, namely the initial interview, the metaphors activity, the research task, the problem-solving task, the case study, and the final interview. Although all these activities are used to assess the overall potential of the candidate, the rationale for their inclusion in selection differs slightly (see Table 1).

The outcome variables include marks from six different course modules and the course average. The six modules include child psychotherapy (CP); ethics and practical work (EP); applied and community psychology (ACP); theory of psychological interventions (ToPI); neuropsychology, psychopharmacology and psychopathology (NPP), and a research module. The course average is calculated by using 50% coursework and 50% research module. The Health Professions Council of South Africa's minimum standards for the training of counselling and clinical psychology (HPCSA, 2019a; HPCSA 2019b), are reflected through the courses in both Masters programmes.

To ensure confidentiality and anonymity of the participants and full anonymity of the researcher, an independent person, who by the nature of her position at the university has access to the information, anonymised all the data. The data coding and anonymisation were thoroughly checked by the independent individual, who went through the data twice after completion to ensure its accuracy. The list of codes that correspond with the

participants was deleted in order to assure that no links can be made between the data and individuals, thus ensuring true anonymisation of the data.

Table 1. Rationale for each selection activity – skills assessed.

Selection activity	Initial interview	Case study	Metaphor	Research task	Problem-solving	Final interview
Skills and attributes assessed	Strengths; Weaknesses; Managing anxiety, pressure, crises; Interaction style; Self-insight; Self-regulation; Personal influences; Life experiences	Analytical thinking and reasoning; Thinking preferences and style	Creative Projection; Managing group dynamics	Research skills	Ability to handle new and unfamiliar situations; Decision making; Problem-solving; Group interaction	Suitability for the programme

Ethical considerations

Ethical clearance was obtained from the participating university's Human Research Ethics Committee and the Research Data Gatekeepers Committee (RDGC). The name of the participating university has been omitted to ensure participant privacy and confidentiality. This is done because the number of students admitted into these degrees

is limited to a small number each year (approximately between six and eight students) and thus may be identifiable if the name of the university is given.

Informed consent was obtained from the RDGC rather than from the participants themselves, since for informed consent to be gained from each participant, the researcher would have to have had access to confidential biographical information, which would have been in direct conflict with the confidentiality and privacy of the participants.

Data analysis

Pearson's correlation coefficient and Spearman's rank-order correlation analyses were performed to investigate the relationship between the selection activities and performance variables. Additionally, inter-correlations between the selection activities and the performance measures were conducted to determine whether any of the activities correlated with each other.

In order to investigate the predictive nature of the master's degree selection process, regression analyses were conducted between each selection activity and performance measure, which showed significant correlations. Since there was only one statistically significant predictor for each performance measure that showed a significant correlation and prediction, a multiple regression could not be performed (Tredoux & Durrheim, 2019).

Lastly, a canonical correlation was performed, which allowed the researcher to assess the nature of the relationship between the two multidimensional variables (Hardoon et al., 2004), namely the set of selection activities and set of performance measures (Andrew et al., 2013). This analysis helped in determining which linear combinations of input measures and outcome variables had the most significant relationships (Andrew et al., 2013).

Results

Normality of data

Q-plots, skewness co-efficient, and the central limit theorem were used to assess normality of the data (Tredoux & Durrheim, 2019). No significant deviation from normality was found for the analysed data.

Descriptive and reliability statistics

See Table 2 for descriptive statistics of all variables.

Internal consistency reliability was measured with the Cronbach alpha and inter-item correlations. The Cronbach alpha value for the course modules revealed good internal consistency ($\alpha = 0.81$). Furthermore, this internal consistency was reiterated by the inter-item correlations, for the majority of the course modules (see Table 3).

Table 2. Descriptive statistics

	N	Mean	Variance	SD	Minimum	Maximum	Skewness coefficient	
Average	60	71.5	12.932	3.596	63	77	-0.355	0.309
CP	81	70.10	47.14	6.866	50	83	-0.748	0.267
ToPI	81	69.89	40.944	6.399	57	83	-0.199	0.267
EP	81	68.84	30.436	5.517	56	81	-0.316	0.267
ACP	81	72.73	30.85	5.554	58	84	-0.369	0.267
NPP	81	70.52	61.503	7.842	53	84	-0.389	0.267
Research	60	71.2	17.519	4.186	59	81	-0.034	0.309
SI	81	8.904	8.768	2.961	4	17	0.238	0.267
RT	81	13.472	27.772	5.23	4	20	-0.084	0.267
M	81	9.742	6.086	2.47	4.6	14.7	-0.153	0.267
CS	81	9.399	6.637	2.576	4	15	0.080	0.267
PS	81	11.014	12.938	3.597	4	20	0.805	0.267
FI	75	5.43	13.815	3.717	1	17	1.071	0.277

Note: N= Number of participants; CP= Child psychotherapy; ToPI= Theory of psychological interventions; EP= Ethics and practical work; ACP= Applied and community psychology; NPP= Neuropsychology, psychopharmacology and psychopathology; SI = Small interview; RT = Research task; M= Metaphors; CS= Case study; PS= Problem-solving; FI = Final interview

Table 3. Inter-item correlations between outcome measures

	Corrected item – total correlation	Cronbach alpha if item deleted
CP	0.698	0.764
ToPI	0.665	0.772
EP	0.764	0.756
ACP	0.608	0.786
NPP	0.611	0.791
Research	0.182	0.853

Relationships between selection activities and course module marks

The case study activity showed significant relationships with EP ($r = -0.282$; $p < 0.05$) and ACP ($r = -0.219$; $p < 0.05$), indicating that the case study and EP module and case study and ACP module had small negative correlations such that as scores increased for the case study activity, marks decreased for both these modules.

The metaphors activity revealed statistically significant relationships with CP ($r = 0.254$; $p < 0.05$) and with TOPI ($r = 0.232$; $p < 0.05$). These relationships indicate that the metaphors activity had small positive correlations with the CP and ToPI modules, demonstrating that if a selection candidate performs well in the metaphors activity, they will likely perform well in the CP and ToPI modules. Similarly, the research task showed a significant relationship with NPP ($r = -0.3$; $p < 0.01$). This shows a small positive

correlation between the two variables such that an individual obtaining good marks in the research task is likely to perform well in the NPP module.

Lastly, the problem-solving activity revealed a significant relationship with the course average ($r = 0.285$; $p < 0.05$). Results showed a small positive correlation between the two, thus indicating that the better a candidate performs in this activity, the higher the likelihood that they will achieve higher marks in their coursework average.

Table 4. Correlations between Selection Activities and Outcome Measures

	Average	CP	ToPI	EP	ACP	NPP	Research	SI	RT	M	CS	PS	FI
Average	1												
CP	.585**	1	.602**	.647**	.585**	.614**	.081	.048	-.196	.254*	-.084	.165	-.160
ToPI	.600**	.602**	1	.699**	.538**	.572**	.123	-.015	-.132	.232*	-.143	-.070	-.090
EP	.738**	.647**	.699**	1	.581**	.593**	.253	-.042	-.039	.171	-.282*	.066	-.209
ACP	.687**	.585**	.538**	.581**	1	.546**	.180	.085	-.006	.079	-.219*	.162	-.035
NPP	.609**	.614**	.572**	.593**	.546**	1	.114	.072	-.300**	.184	-.074	.027	-.180
Research	.709**	.081	.123	.253	.180	.114	1	-.211	-.006	-.161	.051	.197	-.041
SI	-.058	.048	-.015	-.042	.085	.072	-.211	1	.017	.105	.151	-.007	.086
RT	-.017	-.196	-.132	-.039	-.006	-.300**	-.006	.017	1	.002	-.103	.161	-.032
M	.05	.254*	.232*	.171	.179	.184	-.161	.105	.002	1	-.008	.211	.314**
CS	-.128	-.084	-.143	-.282*	-.219*	-.074	.051	.151	-.103	-.008	1	-.211	.195
PS	.285*	.165	-.070	.066	.162	.027	.197	-.007	.161	.211	-.211	1	-.055
FI	-.102	-.160	-.090	-.209	-.035	-.180	-.041	.086	-.032	.314**	.195	-.055	1

Note: SI = Small Interview; RT = Research Task; M= Metaphors; CS= Case Study; PS= Problem-Solving; FI = Final Interview

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

Regression analyses between selection activities and outcome measures

With CP as the dependent variable and metaphors as the independent variable, $R^2 = 0.07$, $F(1, 79) = 5.45$, $p < 0.05$, the metaphors activity explains approximately 7% of the variance in CP. The metaphors activity had a statistically significant regression relationship with CP ($\beta = 0.71$, $r = 0.02$, $t = 2.34$). Similarly, with TOPI as the dependent variable and metaphors as the independent variable, $R^2 = 0.04$, $F(1, 79) = 4.49$, $p < 0.05$, the metaphors activity accounts for approximately 4% of the variance in ToPI. The metaphors activity had a statistically significant regression relationship with TOPI ($\beta = 0.60$, $r = 0.04$, $t = 2.12$). The metaphors activity thus positively predicts both the CP and ToPI modules such that if an individual performs well in metaphors during selection, they will likely perform well in both these course modules.

With EP as the dependent variable and CS as the independent variable, $R^2 = 0.08$, $F(1, 79) = 6.82$, $p < 0.05$, the CS activity accounts for approximately 8% of the variance in EP. The CS activity had a statistically significant regression relationship with EP ($\beta = -0.60$, $r = 0.01$, $t = -2.28$). Likewise, with ACP as the dependent variable and CS as the independent variable, $R^2 = 0.05$, $F(1, 79) = 3.99$, $p < 0.05$, the CS activity accounts for approximately 5% of the variance in ACP. The CS activity had a statistically significant regression relationship with ACP ($\beta = -0.47$, $r = 0.049$, $t = -2.00$).

These results indicate that the CS selection activity negatively predicts both the EP and ACP modules. Therefore, if a selection candidate were to obtain high scores for the CS activity, they would then perform poorly on both the EP and ACP modules.

With NPP as the dependent variable and RT as the independent variable, $R^2 = 0.09$, $F(1, 79) = 7.80$, $p < 0.01$, RT accounts for approximately 9% of the variance in NPP. RT had a statistically significant regression relationship with NPP ($\beta = -0.45$, $r = 0.007$, $t = -2.79$). This result shows that the higher a candidate performs in RT, the higher their marks will be for the NPP module during their M1 year.

Lastly, with the average as the dependent variable and PS as the independent variable, $R^2 = 0.08$, $F(1, 79) = 5.12$, $p < 0.05$, the PS activity accounts for approximately 8% of the variance in the average. The PS activity had a statistically significant regression relationship with the average ($\beta = 0.41$, $r = 0.03$, $t = 2.26$). Overall, this regression result shows that the PS activity positively predicts the coursework average of the student during their M1 year. Therefore, the better the candidate performs in the PS activity, the higher their coursework average will be.

Discussion

This was the first study of its kind to assess the validity of a selection process that has been used for decades to determine which few lucky students will continue their journey to become clinical or counselling psychologists. For generations of potential candidates, it could only be assumed that six selection activities, held at a university during a one-week period, could predict whether or not they will be “good students” and “good psychologists”. This study finally added scientific merit to the selection process by weighing up the predictive strength of these selection activities with seven outcome variables (six course modules and the coursework average).

Metaphors activity

As metaphors are considered a tool in psychotherapy and seeing that the metaphors selection activity can be linked to the emotional and relational domains of a psychologist, it is surprising that it did not predict the EP module, given that it evaluates the student’s ability to conduct efficient and effective psychotherapy. A possible reason for this non-result could be the manner in which the M1 practical module is assessed, which does not allow for the evaluators to assess the use of metaphors in the therapeutic process nor assess the therapeutic relationships the student is able to build with their client.

However, the metaphors activity did positively predict the CP and ToPI modules. These modules reflect the cognitive domain of a psychologist, as they assess the student’s ability

to learn, understand, and apply new theoretical orientations and psychological treatments both for children and adults.

When considering child psychotherapy, various forms of play therapy are often used with a number of different theoretical underpinnings (Pernicano, 2015). During play, children regularly communicate and express experiences with the aid of metaphors (Bowman, 1995; Snow et al., 2005; Gordon, 2018) projecting themselves, their emotions, and their experiences onto different toys and objects (Snow et al., 2005; Pernicano, 2015; Gordon, 2018). The psychologist then interprets these projections and integrates them to help the child to obtain a better understanding of and overcome their experiences and emotions (Drucker, 1994; Snow et al., 2005). This use and interpretation of metaphorical expressions helps the child to make changes in their behaviour and enhance their resilience and coping skills (Snow et al., 2005).

Using a metaphor as a technique in play therapy requires various skills from a psychologist, such as “flexibility, spontaneity, and creativity” (Pernicano, 2015, p. 6) – skills that are assessed in the metaphors activity. Making effective use of and translating metaphors into a play therapy practice requires thorough theoretical knowledge and underpinning of child psychology and psychotherapy that include the fundamental concepts of child development (Pernicano, 2015). Furthermore, a psychologist must be able to assess a child’s play capabilities, cognitive capacity, language skills, capacity for attention and concentration, and emotional maturity and understandings (Pernicano,

2015). This is required because, as with any intervention, the use of metaphors must align with the child's overall development and abilities (Pernicano, 2015).

Therefore, the result of the metaphors selection activity positively predicting the CP module could be explained as follows: The skills which are evaluated in the metaphors activity form part of the skills that are required to effectively implement intervention plans for children and adolescents, given that psychotherapy for this population has a large emphasis on play therapy and the use of various types of metaphors, such as storytelling and projection of the self and experiences onto objects, art, and toys (Snow et al., 2005; Pernicano, 2015; Gordon, 2018). For a psychologist to effectively use and implement these interventions, a thorough foundation of child and adolescent psychotherapy, psychopathology, and development is required. This information is presented to students in the CP module. This module therefore not only teaches the required theoretical knowledge but also fosters and develops the skills that are required to effectively work with and treat children and adolescents.

Similarly, the metaphors activity positively predicted the ToPI module. This may suggest that if a selection candidate is able to creatively project themselves onto an object and create metaphors, they may be better at interpreting and understanding the metaphors which underpin various psychological theories (Witztum et al., 1988; Bowman, 1995; Kopp & Craw, 1998; Wickman et al., 1999; Raskin, 1999; Wahlström, 2006) and therefore perform well in this module. Additionally, a candidate who performs well in

metaphors may show good flexibility – a skill which is used in the ToPI module, as the student needs to be flexible when selecting the appropriate theoretical orientation and theory to formulate and conceptualise different patients and case studies.

Additionally, metaphors can be seen to help foster therapeutic change (Kruger & Swanepoel, 2017), as they can aid in emotional understanding. Through the collaborative analysis of client-generated metaphors, a client is able to discover emotions, thoughts, experiences, and memories related to the metaphorical image (Kruger & Swanepoel, 2017). Furthermore, metaphors can be seen to tap into a client's intrapsychic functioning and can thus serve as "a bridge to the client's inner world" (Kruger & Swanepoel, 2017, p. 93) for the therapist and the client as it enables connection between a client's lived experiences and their emotional experiences (Rabinowitz & Cochran, 2002). Literature indicates that metaphors provide individuals with a novel way of expressing both their emotional and relational experiences and increase facilitate comfort when explaining vulnerable feelings and experiences (Genuchi et al., 2016; Mckelley, 2014).

Research task

The basic skills a researcher requires to conduct effective and efficient research (Alm, 2010; Clark & Sousa, 2017; Strnadová et al., 2013) can be seen in the NPP module. A researcher needs extensive knowledge of and must review relevant literature (Creswell, 2009) – the NPP module requires that students possess extensive knowledge on neurophysiology, neuroanatomy, psychopharmacology, and psychopathology. This

information is then used to assess a client's neuropsychological functioning and psychopathology, evaluating the brain-behaviour link. Students are then required to integrate this information and assessment to form and test hypotheses regarding the possible reasons for the client's current functioning and behaviour and make clinical diagnoses. Therefore, the research task positively predicts the NPP module, as they share the same essential skills required to succeed in both research and clinical diagnosis.

Problem-solving task

The skills assessed in the PS task during selections are the same skills that students use throughout the various course modules when engaging in PBL (Searight & Searight, 2009; Karantzas et al., 2013). Therefore, candidates who perform well in the problem-solving task will achieve a better coursework average since they are using and enhancing skills that are already in place. Furthermore, examinations often make use of various clinical cases and complex problems wherein the student is required to use their problem-solving and critical analysis skills to link their theoretical knowledge with the cases, make hypotheses, and provide possible diagnoses, treatment plans, and solutions to questions posed.

Moreover, both the PS tasks and the coursework modules during M1 (excluding the EP module) were considered to fall within the cognitive domain of a psychologist (Jennings & Skovholt, 1999). The results indicate that the PS task is able to accurately predict those

candidates who would be considered “good students” but also “good psychologists”. This is the case because it not only predicted theoretical course modules but the average which included the practical module (EP), thus reflecting the relational and emotional domains of a psychologist.

Case study

The fact that the CS activity showed negative predictions with the EP module is interesting, since they both look at similar concepts and presentations. It is hypothesised that this is due to this activity’s focus being strictly on the candidate’s ability to think critically and analytically about an unfamiliar case and their ability to remain calm under pressure, whereas the EP module’s focus is on assessing psychological knowledge and insight and the ability to ethically manage and conduct psychotherapy. However, it is still peculiar that this selection activity negatively predicts the EP module, and so, more investigation is required concerning this relationship.

Similarly, this activity also negatively predicted the ACP module. This negative prediction may be rooted in the difference between individualist and collectivistic interventions and overall aims, as the case study activity’s focus is largely on individuals, while the ACP module’s focus is on community-based interventions.

Conclusion

This study has shown that the selection process for the master's degrees in clinical and counselling psychology is valid and selects candidates who possess the relevant skills and attributes to become "good psychologists". This was shown through the statistically significant positive predictions between the metaphors activity and the CP and ToPI modules, between the research activity and NPP module, and between the problem-solving activity and coursework average. Additionally, skills identified in the selection activities and course modules reflect those required to build strong working alliances in psychotherapy, which is a crucial aspect in conducting effective psychotherapy (Ackerman & Hilsenroth, 2003; Castonguay et al., 2006; Hersoug et al., 2001; Horvath et al., 2011; Lambert & Barley, 2001; Sullivan et al., 2005).

However, there were statistically significant negative predictions between the CS activity on the one hand and the EP and ACP modules on the other hand. Further investigation into this selection activity is recommended, as the skills supposedly assessed should positively predict the EP module, which was not observed. Given that community-based interventions are considered crucial in the transformation of traditional psychological interventions in South Africa (Pillay et al., 2013), it is imperative to investigate selection activities that would better predict the ACP module. Moreover, an important aspect of the transformation of psychology in South Africa includes the selection of individuals from previously disadvantaged populations into masters programmes. As this study did not

have access to the demographic information of the participants, it was unable to assess whether the participating university selected candidates that fit this criteria. As such, qualitative research on this subject matter may be better able to yield demographic information that may be able to provide more in depth information regarding the subject.

Lastly, the interviews did not correlate or predict any of the modules and can thus be seen as subjective activities that are used for the selection panel to become more acquainted with the candidate and do not evaluate skills that are required to succeed in the master's degree modules or those which are considered to be essential for a "good psychologist".

This study may benefit future applicants, as it may advise the development of a more informed, and accurate selection across universities. Additionally, the results of this study will benefit the university that was studied, since it provides valuable information regarding whether the current processes are adequate and effective.

Furthermore, this study did not differentiate between the selection validity for clinical and counselling psychology Masters programmes and also only focused on the therapeutic aspects of a psychologist. Further investigations into the selection validity for each specific psychology programmes as well as into other aspects of a psychologist including policy making, psychometric assessment and academics, to name but a few, would be beneficial.

Conflict of interest

The researcher was involved in a similar selection process to the one discussed and researched and may therefore have had preconceived ideas which were bracketed when interpreting results. Furthermore, interpretations of the results were checked by an objective statistician.

References

- Ackerman, S., & Hilsenroth, M. (2003). A review of therapist characteristics and techniques positively impacting the therapeutic alliance. *Clinical Psychology Review*, 23(1), 1-33. [https://doi.org/10.1016/s0272-7358\(02\)00146-0](https://doi.org/10.1016/s0272-7358(02)00146-0)
- Alm, N. (2010). Invited commentary on Bigby & Frawley's reflections on the challenges of doing inclusive research as part of the “Making Life Good in the Community” study. *Journal Of Intellectual & Developmental Disability*, 35(2), 62-63. <https://doi.org/10.3109/13668251003726846>
- Anderson, L., Bloom, B., & Krathwohl, D. (2001). *A taxonomy for learning, teaching, and assessing. A Revision of Bloom's Taxonomy of Educational Objectives*. Longman.
- Andrew, G., Arora, R., Bilmes, J., & Livescu, K. (2013). Deep canonical correlation analysis. In International conference on machine learning (pp. 1247-1255). PMLR. <https://doi.org/10.5555/3042817.3043076>
- Banerjee, A., & Chaudhury, S. (2010). Statistics without tears: Populations and samples. *Industrial Psychiatry Journal*, 19(1), 60. <https://doi.org/10.4103/0972-6748.77642>

- Barrie, S. (2006). Understanding What We Mean by the Generic Attributes of Graduates. *Higher Education*, 51(2), 215-241. <https://doi.org/10.1007/s10734-004-6384-7>
- Boud, D., & Falchikov, N. (2006). Aligning assessment with long-term learning. *Assessment & Evaluation In Higher Education*, 31(4), 399-413. <https://doi.org/10.1080/02602930600679050>
- Bowman, R. P. (1995). Using metaphors as tools for counseling children. *Elementary School Guidance & Counseling*, 29(3), 206-216.
- Castonguay, L., Constantino, M., & Holtforth, M. (2006). The working alliance: Where are we and where should we go?. *Psychotherapy: Theory, Research, Practice, Training*, 43(3), 271-279. <https://doi.org/10.1037/0033-3204.43.3.271>
- Clark, A., & Sousa, B. (2017). The Five Neglected Skills All Qualitative Researchers Need. *International Journal Of Qualitative Methods*, 16(1), 160940691771341. <https://doi.org/10.1177/1609406917713418>
- Collins Dictionaries. (2009). Metaphor. *Collins English Dictionary* (10th ed., p. 1040). HarperCollins UK.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Sage Publications, Inc.

Department of Justice. (2001, March, 9). Promotion Of Access To Information Act, 2000 Regulations Relating To The Promotion Of Access To Information, Regulation Gazette (No.7024). Government Gazette, Vol. 428.

Drucker, J. (1994). *Constructing metaphors: the role of symbolization in the treatment of children*. In A. Slade & D. P. Wolf (Eds.), *In Children at play: Clinical and developmental approaches to meaning and representation* (pp. 62–80). Oxford University press.

Durrheim, K., & Tredoux, C. (2004). *Numbers, hypotheses & conclusions: A course in statistics for the social sciences*. Juta and Company Ltd.

Ed, P. (2016). Psychology Master's Selection and Employment... prospects in the field of Psychology - PsyTalk. Retrieved 8 March 2020, from <http://psytalk.psyssa.com/psychology-Master's-selection-employment-prospects-field-psychology/>

Etikan, I., Musa, S., & Alkassim, R. (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal Of Theoretical And Applied Statistics*, 5(1), 1. <https://doi.org/10.11648/j.ajtas.20160501.11>

Field, A. (2009). *Discovering statistics using IBM SPSS statistics* (3rd ed., p. 821). Sage Publications.

Gelo, O., Braakmann, D., & Benetka, G. (2008). Quantitative and Qualitative Research: Beyond the Debate. *Integrative Psychological And Behavioral Science*, 42(3), 266-290. <https://doi.org/10.1007/s12124-008-9078-3>

Genuchi, M., Hopper, B., & Morrison, C. (2016). Using Metaphors to Facilitate Exploration of Emotional Content in Counseling With College Men. *The Journal Of Men's Studies*, 25(2), (133-149).
<https://doi.org/10.1177/1060826516661187>

Goldfried, M., & Davila, J. (2005). The role of relationship and technique in therapeutic change. *Psychotherapy: Theory, Research, Practice, Training*, 42(4), 421-430. <https://doi.org/10.1037/0033-3204.42.4.421>

Goldfried, M. (2013). What should we expect from psychotherapy?. *Clinical Psychology Review*, 33(7), 862-869. <https://doi.org/10.1016/j.cpr.2013.05.003>

Gordon, T. J. (2018). Utilizing animal metaphors in child psychotherapy: an integrative approach for therapists. *The Graduate Review*, 3(1), 135-148. https://vc.bridgew.edu/cgi/viewcontent.cgi?article=1072&context=grad_rev

Hardoon, D., Szedmak, S., & Shawe-Taylor, J. (2004). Canonical Correlation Analysis: An overview with application to learning methods. *Neural Computation*, 16(12), 2639-2664. <https://doi.org/10.1162/0899766042321814>

- Health Professions Council of South Africa (HPCSA). (2019a). The board of psychology. Minimum standards for the training of clinical psychology. Retrieved from https://www.hpcsa.co.za/Uploads/PSB_2019/Policy%20and%20Guidelines/SG B%20CLIN%20-%20Revised%20October%202019.pdf
- Health Professions Council of South Africa (HPCSA). (2019b). The board of psychology. Minimum standards for the training of counselling psychology. Retrieved from https://www.hpcsa.co.za/Uploads/PSB_2019/Policy%20and%20Guidelines/SG B%20COUNS%20-%20Revised%20October%202019.pdf
- Heppner, P., Cooper, C., Mulholland, A., & Wei, M. (2001). A brief, multidimensional, problem-solving psychotherapy outcome measure. *Journal Of Counseling Psychology*, 48(3), 330-343. <https://doi.org/10.1037/0022-0167.48.3.330>
- Horvath, A., Del Re, A., Flückiger, C., & Symonds, D. (2011). Alliance in individual psychotherapy. *Psychotherapy*, 48(1), 9-16. <https://doi.org/10.1037/a0022186>
- Jennings, L., & Skovholt, T. (1999). The cognitive, emotional, and relational characteristics of master therapists. *Journal Of Counseling Psychology*, 46(1), 3-11. <https://doi.org/10.1037/0022-0167.46.1.3>

Jennings, L., D'Rozario, V., Goh, M., Sovereign, A., Brogger, M., & Skovholt, T.

(2008). Psychotherapy expertise in Singapore: A qualitative investigation.

Psychotherapy Research, 18(5), 508-522.

<https://doi.org/10.1080/10503300802189782>

Jennings, L., Goh, M., Skovholt, T., Hanson, M., & Banerjee-Stevens, D. (2003).

Multiple factors in the development of the expert counsellor and therapist.

Journal Of Career Development, 30(1), 59-72.

<https://doi.org/10.1177/089484530303000104>

Karantzas, G., Avery, M., Macfarlane, S., Mussap, A., Tooley, G., Hazelwood, Z., &

Fitness, J. (2013). Enhancing critical analysis and problem-solving skills in

undergraduate psychology: An evaluation of a collaborative learning and

problem-based learning approach. *Australian Journal Of Psychology*, 65(1), 38-

45. <https://doi.org/10.1111/ajpy.12009>

Kim, Y., Kim, T., & Ergün, T. (2015). The instability of the Pearson correlation

coefficient in the presence of coincidental outliers. *Finance Research Letters*, 13,

243-257. <https://doi.org/10.1016/j.frl.2014.12.005>

Kopp, R., & Craw, M. (1998). Metaphoric language, metaphoric cognition, and

cognitive therapy. *Psychotherapy: Theory, Research, Practice, Training*, 35(3),

306-311. <https://doi.org/10.1037/h0087795>

Kruger, D., & Swanepoel, M. (2017). Gluing the pieces together: Female adolescents' construction of meaning through digital metaphoric imagery in trauma therapy. *The Arts In Psychotherapy*, 54, 92-104.

<https://doi.org/10.1016/j.aip.2017.04.011>

Legowski, T., & Brownlee, K. (2001). Working with Metaphor in Narrative Therapy. *Journal Of Family Psychotherapy*, 12(1), 19-28.

https://doi.org/10.1300/j085v12n01_02

McKelley, R. A. (2014). Pushing haystacks and cracking steel balls: Using metaphors with men.

Mayekiso, T., Strydom, F., Jithoo, V., & Katz, L. (2004). Creating new capacity through postgraduate selection. *South African Journal Of Psychology*, 34(4), 657-671. <https://doi.org/10.1177/008124630403400409>

Participating University. (2018). M SELECTION: OUTLINED RATIONALE AND CRITERIA.

Participating University. (2021). Faculty of Health Sciences: Postgraduate Yearbook.

O'Hare, L., & McGuinness, C. (2005). Skills and Attributes Developed by Psychology Undergraduates: Ratings by Undergraduates, Postgraduates, Academic

- Psychologists and Professional Practitioners. *Psychology Learning & Teaching*, 4(1), 35-42. <https://doi.org/10.2304/plat.2004.4.1.35>
- Pernicano (2014). *Using trauma-focused therapy stories: Interventions for therapists, children and their caregivers*. New York: Routledge.
- Pernicano, P. (2015). Using therapy stories and metaphor in child and family treatment. *Liana Lowenstein Newsletter*.
- Pillay, A., Ahmed, R., & Bawa, U. (2013). Clinical psychology training in South Africa: A call to action. *South African Journal Of Psychology*, 43(1), 46-58. <https://doi.org/10.1177/0081246312474411>
- Rabinowitz, F. E., & Cochran, S. V. (2002). *Deepening psychotherapy with men*. American Psychological Association.
- Raskin, J. (1999). METAPHORS AND MEANING: CONSTRUCTING THE CREATIVE PSYCHOTHERAPIST. *Journal Of Constructivist Psychology*, 12(4), 331-347. <https://doi.org/10.1080/107205399266046>
- Rosnow, R.L., & Rosenthal, R. (2005). *Beginning behavioral research: A conceptual primer* (5th Ed.). Pearson Prentice Hall

- Rotter, J. (1978). Generalized expectancies for problem solving and psychotherapy. *Cognitive Therapy And Research*, 2(1), 1-10.
<https://doi.org/10.1007/bf01172508>
- SAQA. (2021). *National Qualifications Framework. Sub-frameworks and Qualification Types*. Department of Higher Education and Training.
- Searight, H., & Searight, B. (2009). Implementing Problem-Based Learning in an Undergraduate Psychology Course. *Insight: A Journal Of Scholarly Teaching*, 4, 69-76. <https://doi.org/10.46504/04200906se>
- Sedgwick, P. (2012). Pearson's correlation coefficient. *BMJ*, 345(jul04 1), e4483-e4483.
<https://doi.org/10.1136/bmj.e4483>
- Sims, P. (2003). Working with Metaphor. *American Journal Of Psychotherapy*, 57(4), 528-536. <https://doi.org/10.1176/appi.psychotherapy.2003.57.4.528>
- Snow, M. S., Ouzts, R., Martin, E. E., & Helm, H. (2005). Creative metaphors of life experiences seen in play therapy. *VISTAS Online no. Article*, 12, 63-65.
- Stats S.A. (2019). *Mid-Year Population Estimates*. Pretoria: Stats.
- Strnadová, I., Cumming, T., Knox, M., & Parmenter, T. (2013). Building an Inclusive Research Team: The Importance of Team Building and Skills Training. *Journal*

Of Applied Research In Intellectual Disabilities, 27(1), 13-22.

<https://doi.org/10.1111/jar.12076>

Sullivan, M., Skovholt, T., & Jennings, L. (2005). Master Therapists' Construction of the Therapy Relationship. *Journal Of Mental Health Counseling*, 27(1), 48-70.

<https://doi.org/10.17744/mehc.27.1.171ajdvw9muepht3>

Thomas, T. (2011). Developing First Year Students' Critical Thinking Skills. *Asian Social Science*, 7(4). <https://doi.org/10.5539/ass.v7n4p26>

Tongco, M. (2007). Purposive Sampling as a Tool for Informant Selection. *Ethnobotany Research And Applications*, 5, 147. <https://doi.org/10.17348/era.5.0.147-158>

Wahlström, J. (2006). The narrative metaphor and the quest for integration in psychotherapy. *New approaches to integration in psychotherapy*, 38-49.

Wickman, S., Daniels, M., White, L., & Fesmire, S. (1999). A "Primer" in Conceptual Metaphor for Counselors. *Journal Of Counseling & Development*, 77(4), 389-394. <https://doi.org/10.1002/j.1556-6676.1999.tb02464.x>

Witztum, E., van der Hart, O., & Friedman, B. (1988). The use of metaphors in psychotherapy. *Journal Of Contemporary Psychotherapy*, 18(4), 270-290. <https://doi.org/10.1007/bf00946010>

Zainal, Z. (2007). Case study as a research method. *Jurnal Kemanusiaan*, 5(1).

Chapter Three

This research process has been a difficult and challenging one, physically, mentally and emotionally but also a very rewarding one. It challenged but also enhanced my research skills and abilities, allowing me to grow in areas that I otherwise would not have been able to. It specifically allowed me to better analyse previous literature and statistical results, using a critical and reflective lens. This gave me better insight into my own research and overall topic but also into academic journals and writings.

The topic of this research is one that has personal meaning and has had an influence over my own journey in becoming a clinical psychologist. It has been a long and rigorous journey since deciding on clinical psychology as a career path and starting on my first degree towards this aim. This journey has been filled with many ups and down, excitements and disappointments. Included in this has been a number of different Master's selection processes-each with their own unique difficulties, challenges and lessons. An experience that was physically, mentally and emotional draining and taxing but one that ended in success and excitement for me, unlike for so many other applicants. Therefore, when the opportunity arose to investigate the validity of such a Master's selection process, I was eager to take it up.

Due to the fact that I had been through selection processes, not only at the participating university but at a number of other universities in South Africa, I had certain preconceived ideas and biases. Due to my personal experiences, these biases included the suitability and validity of various selection activities. This was driven by the subjectivity of the panel members throughout the various universities and selection activities. However, these biases and preconceived ideas were bracketed when results were interpreted. The knowledge and insight of the selection processes from my supervisors helped me to remain objective and not let my own subjectivity hamper my interpretations.

Having gone through selection processes where I was rejected at some and accepted at another, fuelled my curiosity on the topic. I found it interesting and perplexing that universities across South Africa that were selecting candidates for the same Master's degrees could deem one candidate appropriate for the degree and successful in their application but others would deem the same candidate unsuccessful. It therefore, became a matter of considering whether these selection processes that these hopeful and aspiring candidates go through were really valid and whether the resources used (from the university and the candidate in terms of financial and emotional) were required or wasted.

The results of the study were interesting yet perplexing in some aspects. The results surrounding the Metaphors activity were very interesting and provided me with more insight into metaphoric techniques used in psychotherapy. Reflecting on and hypothesising possible reasons for the predictive relationship between the research task and the NPP module, provided me with insight into how necessary research skills are for a psychologist when hypothesising, formulating and diagnosing clients.

Furthermore, the fact that the problem-solving activity positively correlated with the overall average was expected and made sense due to the fact that PBL is used throughout the course modules in the M1 year. However, it was interesting that the problem-solving only predicted the overall average and not the individual course modules seeing that these constitute the average.

Lastly, the negative predictive relationship between the Case Study activity and the Ethics and Practical module during M1 was a perplexing result as it was initially hypothesised that these would have a positive predictive relationship. It was a challenge to reflect on and interpret this result as it was confusing and I was taken aback by it. However,

through discussions and reflections, it was recommended that this activity be investigated further.

The results indicating that the interviews did not show any relationship with the course modules reinforced my own preconceived ideas and biases regarding the interviews in selection processes. From past experiences and discussions with other selection candidates, at times, questions posed during these interviews seemed to push the panel members own agenda and not necessarily specifically relate to assessing the potential of the candidates to become ‘good’ psychologists nor evaluate the necessary skills. However, these ideas and biases were bracketed before results were interpreted.

In future, these interviews should include more transparency from panel members regarding how questions pose relate to the suitability of the candidate for the programmes and the potential to become ‘good’ psychologists.

Overall, completing this research study gave me significant insight into a meticulous selection process as well as what skills could be considered essential for a ‘good psychologist’ to possess.

For future researchers wanting to investigate further selection processes across different universities in South Africa, the following advice and recommendations should be considered. Researchers, who by nature of their profession would have gone through a similar selection process, should reflect on their own selection processes (successful and unsuccessful processes) before beginning with their research in order to become aware of and bracket their own biases and preconceived ideas.

It is also recommended that researchers be aware of possible backlash that they may receive from participating universities, panel members and previous selection candidates as results may prove to be controversial.

Although, I did gain skills and insight throughout this process, it was not an easy one, especially undertaking and completing this mini-dissertation in the face of a worldwide pandemic. I expected this research module to be a difficult process but did not factor in the extra toll the COVID-19 pandemic would take. Fears regarding COVID-19, extra precautions and revolving lockdown restrictions, created unexpected fatigue, burnout and emotional exhaustion. This impacted on my ability to manage my current internship, responsibilities and completing my research.

I found it challenging to manage my own expectations of being efficient and completing this mini-dissertation in a set time frame with ensuring self-care and mitigating burnout. Furthermore, the pandemic and various delays such as delays with Ethical and RDGC approval, set back my original timeline for completing this research. I struggled with not being able to meet these previous expectations and became very critical and harsh of myself and my work ethic. I am tremendously grateful for the support from friends and colleagues around me who served as a voice of reason for me during these times and allowed me to focus on progress that I had made rather than previous expectations.

Additional difficulties which competed with my pre-conceived expectations were difficulties and delays in obtaining approval from HREC and The Research Data Gatekeepers Committee. These caused great frustration for myself as decisions regarding approval and ethical and legal requirements were out of my hand. Having large portions of time wherein I could not carry on with my research and the write-up of my mini-dissertation heavily impacted upon my timeline and thus created irritation but also made myself be more critical of myself and created a lot more pressure to complete my work on time.

Adding to this pressure, was the strict timeline that needed to be followed in order to complete my degree and write board exams for registration as a clinical psychologist, on a

specified date. In the beginning of this process, I had high hopes and expectations to complete my research early in the year and write these board exams in October of 2021. Due to delays, effects of the pandemic as well as managing a work-life balance, this did not come to fruition. Accepting this took a long time as it meant delaying job opportunities for next year and felt as if I had let myself down. However, this became easier to accept over time as it allowed myself more time in order to perform to the best of my ability.

Conclusion

In reflecting on the overall process, it can be described as a challenging, draining and difficult experience yet one that has been significantly rewarding in its own way.

I struggled to manage responsibilities (work, research and personal life) that seemed to compete for my sparse resources in terms of mental, emotional and physical reserves. However, throughout the fatigue and emotional exhaustion writing this mini-dissertation during a worldwide pandemic caused, I gained new experience and enhanced skills and aptitudes. These included sharpening my research abilities with regards to searching for, analysing and interpreting literature and results.

Additionally, this topic challenged me to bracket my own subjectivity and biases towards the selection processes in order to objectively interpret results and answer my research questions. I am greatly appreciative of the insight into the selection processes and wisdom which my study leader possessed as this assisted in this regard.

Managing the disappointment of not meeting my original expectations due to delays, difficulties, COVID-19 pandemic and fatigue, was a difficult yet eye-opening experience. This helped me to see the extent to which I was critical of myself and helped teach me to change my focus from mainly critique to supporting and encouraging myself throughout the process.

Addendum A: HREC Approval Letter



Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 086 016 9698
Web: <http://www.nwu.ac.za/>

North-West University Health Research Ethics
Committee (NWU-HREC)

Tel: 018 299-1206
Email: Ethics-HRECAppl@nwu.ac.za (for human
studies)

5 May 2021

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the North-West University Health Research Ethics Committee (NWU-HREC) on 05/05/2021, the NWU-HREC hereby approves your study as indicated below. This implies that the NWU-HREC grants its permission that, provided the general conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: Assessing the predictive strength of a Clinical/Counselling Psychology Master's degree selection process

Principal Investigator/Study Supervisor/Researcher: Dr R Spies

Student: R Derwin - 35034637

Ethics number:

N	W	U	-	0	0	4	9	9	-	2	0	-	A	1
Institution				Study Number						Year			Status	

Status: S = Submission; R = Re-Submission; P = Provisional Authorisation;
A = Authorisation

Application Type: Single study

Commencement date: 05/05/2021

Expiry date: 31/05/2022

Risk:

Minimal

Approval of the study is provided for a year, after which continuation of the study is dependent on receipt and review of an annual monitoring report and the concomitant issuing of a letter of continuation. A monitoring report is due at the end of May annually until completion.

General conditions:

While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:

- The principal investigator/study supervisor/researcher must report in the prescribed format to the NWU-HREC:
 - annually on the monitoring of the study, whereby a letter of continuation will be provided annually, and upon completion of the study; and
 - without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study.
- The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the principal investigator/study supervisor/researcher must apply for approval of these amendments at the NWU-HREC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited.
- Annually a number of studies may be randomly selected for active monitoring.
- The date of approval indicates the first date that the study may be started.
- In the interest of ethical responsibility, the NWU-HREC reserves the right to:
 - request access to any information or data at any time during the course or after completion of the study;
 - to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;

- *withdraw or postpone approval if:*
 - *any unethical principles or practices of the study are revealed or suspected;*
 - *it becomes apparent that any relevant information was withheld from the NWU-HREC or that information has been false or misrepresented;*
 - *submission of the annual monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and/or*
 - *new institutional rules, national legislation or international conventions deem it necessary.*
- NWU-HREC can be contacted for further information via Ethics-HRECAppl@nwu.ac.za or 018 299 1206

Special conditions of the research approval due to the COVID-19 pandemic:

Please note: Due to the nature of the study i.e. (statistical analysis of previously collected data from student records) this study will be able to proceed during the current alert level, following receipt of the approval letter. No additional COVID-19 restrictions have been placed on the study except that the researcher must ensure that before proceeding with the study that all research team members have reviewed the North-West University COVID-19 Occupational Health and Safety Standard Operating Procedure.

The NWU-HREC would like to remain at your service and wishes you well with your study. Please do not hesitate to contact the NWU-HREC for any further enquiries or requests for assistance.

Yours sincerely,



Digitally signed by
Prof Petra Bester
Date: 2021.05.11
09:51:10 +02'00'

Chairperson NWU-HREC

Current details:(23239522) G:\My Drive\9. Research and Postgraduate Education\9.1.5.4 Templates\9.1.5.4.2_NWU-HREC_EAL.docm
20 August 2019
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Addendum B: Certificate of Language Editing



Language Editor's Declaration

■ Language Matters Pty Ltd
■ info@languagematters.co.za
■ 082 920 2991
■ www.languagematters.co.za

Language editing – Translation – Transcription – Simultaneous interpreting

[Company E-mail]

156 O R Tambo Street

Miederpark
Potchefstroom
2531

To whom it may concern,

This document certifies that the manuscript/title listed below has been edited, within reasonable, ethical and professional limits, for syntax, grammar, spelling, punctuation and specific stylistic requirements of the English language by one or more qualified language practitioner(s) at Language Matters. The editor's revisions and comments serve as recommendations; the overall quality of the final manuscript's contents remains the responsibility of the client/author. The language editor does not accept responsibility for any changes made to the manuscript after the issuing of this declaration.

Manuscript title: Assessing the predictive strength of a clinical/counselling psychology master's degree selection process – Chapters 1-3

Author(s): R. Derwin

Date Issued: 9 September 2021

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