

COVER PAGE

**TITLE: A CROSS-SECTIONAL, QUANTITATIVE STUDY ON THE PREVALENCE OF
PSYCHOLOGICAL MYTHS IN STUDENTS IN KZN, SOUTH AFRICA.**

STUDENT NAME AND NUMBER: CLAIRE HILL 16006983

SUPERVISOR'S NAME: SUHAILA AMEER

MODULE NAME AND CODE: RESE8419

QUALIFICATION DETAILS: BA HONOURS IN PSYCHOLOGY

Declaration: I hereby declare that the Research Report submitted for the BA Psychology Honours degree to The Independent Institute of Education is my own work and has not previously been submitted to another University or Higher Education Institution for degree purposes.

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ABSTRACT

The literature on psychological myths has shown that there is a prevalence of myths in the general population and that a psychology course could have an impact on these myths. Most of the literature available on this topic is gleaned from an international context. A replication of the Gardner and Brown (2013) study was undertaken in a South African context. Using similar questions from the instrument of Gardner and Brown (2013), KZN psychology students were asked to answer the questionnaire off the Facebook platform. There were 20 participants. Descriptive content analysis was undertaken; and the findings revealed that at minimum an introductory psychology module did not have an impact on the prevalence of myths in KZN students. The researcher contributed to the psychology field by providing a South African study on psychological myths in students. It is advised that future research examines the factors such as age, educational level and gender to be possible influences on the prevalence of myths in students.

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1. INTRODUCTION

1.1 Contextualisation

This research topic came from an interest in mental health literacy and it was interesting to notice how prevalent psychological myths are in today's society. The literature on psychological myths has shown that an introductory psychology course could have a correlation on the prevalence of psychological myths in the population under study. However, one would think that being educated in psychology that students of psychology would not hold these myths. Different authors in the literature have various definitions for psychological myths, each based on their assumptions about the nature of prior knowledge (Gardner & Brown, 2013; Lambe, Lyddy & Hughes, 2003; Standing, 2003; Higbee & Clay, 1998; Swami, 2012; Standing & Huber, 2003; Taylor 2004). Examples include alternative conceptions and preconceptions, however, in this study a psychological myth would be defined as a belief that is not congruent with core concepts and findings in psychology.

1.2 Rationale

The purpose of this study was to determine if a psychology course had an impact on the belief of psychological myths in students. Belief in myths goes further than the creation of stigmas as it leads to the spread of false information which impedes critical thinking (Lambe et al., 2003). Thus, psychological myths are perpetuated because people are not critical about the information they are receiving. The studies done on the prevalence of psychological myths are mostly North American and may not apply to a South African context. Therefore, one cannot be sure on whether the South African context influences the correlation between an introductory psychology course and the beliefs in psychological myths which makes this research study relevant.

1.3 Problem Statement

The problem was individuals hold beliefs in psychological myths which are harmful to communities of people who struggle with mental health issues (Standing, 2003). These

myths are also problematic for the field of psychology as incorrect beliefs create stigmas around those seeking professional treatment for mental illness. An example of a psychological myth is that only deeply depressed people commit suicide. This myth can stop those who are depressed from seeking treatment as they would think they are not depressed since they do not want to commit suicide.

1.4 Purpose Statement

To determine the effects that a psychology course has on the beliefs of psychological myths.

1.5 Research Question/ Hypothesis/Objectives

➤ Primary research hypothesis

- The introduction to Psychology module will decrease the prevalence of psychological myths in students.

➤ Research questions

- Does a correlation exist between participation in a psychology module and the perpetuation of psychological myths in South African students?
- Does a South African context influence the correlation between a psychology module and the beliefs in psychological myths?

➤ Objectives

- To determine if a correlation exists between participation in a psychology module and the perpetuation of psychological myths in South African students.
- To determine if a South African context influences the correlation between a psychology module and the beliefs in psychological myths.

2. LITERATURE REVIEW

2.1 Theoretical Foundation

2.1.1 Conceptual Change Theory

Conceptual change theory refers to the modification in a person's central beliefs when they are presented with new and accurate information of the concept (Kujawski & Kowalski, 2004). The student is presented a challenge to their basic assumptions. If they wish to proceed, the student must then develop a new concept (Duit & Treagust, 2001). The first phase of conceptual change is called assimilation, which is when a student uses existing concepts to deal with new phenomena (Kujawski & Kowalski, 2004). However, students' current concepts can be inadequate to allow for the successful understanding of new phenomenon (Kujawski & Kowalski, 2004). The student then needs to replace or reorganise their central concepts (Kujawski & Kowalski, 2004). This type of conceptual change is called accommodation (Kujawski & Kowalski, 2004). In this view, learning involves another feature which occurs against the learner's background of current concepts (Duit & Treagust, 2001). Without his or her present concepts, it would become an impossible task for the learner to query the phenomenon, to know what an answer could be, or to distinguish between relevant and irrelevant information (Duit & Treagust, 2001). This theory can be applied to the research study as the student will come across new information through a psychology course that challenges their belief on a psychological myth, assuming the student held this belief before the course began. For example, being only left brained or right brained. He or she will rely on their current concept to organise the investigation on the new information. The student will then realise that you cannot use only one side of your brain when thinking critically and will change that belief. The change in the belief will be that one uses both sides of the brain. However, not all concepts are replaced, as individuals will keep many of their existing concepts (Posner, Strike, Hewson, & Gertzog, 1982). In light of the theory, this is true, however, this may not be the case in a South African context.

During the accommodation process, key concepts are judged by their ability to solving problems (Vosnaidou, 2009). These key concepts can be rejected when they generate too many problems which lacks the capacity to solve (Vosnaidou, 2009). The opposing view will thus be accepted when it shows the potential to solve the problems (Vosnaidou, 2009). The key concepts of an individual are linked to experiences or models which appeals to the person's intuition and make the competing concept seem wrong (Kujawski & Kowalski, 2004). Therefore, the new concept needs to gain acceptance by appearing to make sense (Kujawski & Kowalski, 2004). This applies to the research study as once the new information is explained to the student during the introduction to psychology course, they might make sense of it and change their beliefs.

There are four conditions used in the process of accommodation (Posner, Strike, Hewson & Gertzog, 1982). The first is there must be dissatisfaction with the existing concepts (Posner et al., 1982). For example, a student believing specific psychological myths such as only being left brained or right brained is unlikely to change their beliefs, unless the student believes a less radical change would work. Therefore, before accommodation occurs, the student has to have lost faith in his or her capacity for their existing concepts in order to change their beliefs on the psychological myth (Vosnaidou, 2009). The student will have to realise that one cannot be only left brained or right brained and would change their belief. They would change their belief because of the loss in confidence in their old concept (psychological myth).

The second condition is a new concept must be comprehensible (Posner et al., 1982). The student will have to understand how experience can be changed by a new concept in order to find the possibilities that are a characteristic of it (Kujawski & Kowalski, 2004). For example, a student will have to change the old experience (belief in a psychological myth) with a new one (correct psychological information) such as through the use of attending a psychology lecture which can help change these misconceptions.

Thirdly, a new concept must appear credible (Posner et al., 1982). This means that the student attending the introductory psychology course has to believe that the course and lecturer are credible in order for the myth to change (Lambe et al., 2003). The new

concept must look like it is able to solve the psychological myth generated by the old concepts (Kujawski & Kowalski, 2004). If it does not, then there will be inconsistency of the concepts with the new psychological information (Kujawski & Kowalski, 2004). The student's new knowledge about the psychological myth must be consistent with the old concepts on mental health and literacy, when it is not consistent it will cause cognitive dissonance (Vosniadou, 2009).

Finally, a new concept (new psychological information) should suggest bountiful research as it should allow for new areas of inquiry as the student starts to use critical thinking (Posner et al., 1982). Therefore, a student would accept the new psychological information and he/she might realise that they need to be more sceptical with the information they receive as it could lead to the perpetuation of psychological myths. This applies to the research study as an introductory psychology course is meant to help in the formation of critical thinking skills. When a student forms these critical thinking skills they are more likely to become sceptical about the information they receive and would stop the perpetuation of psychological myths (Posner et al, 1982).

This theory creates an understanding of psychological myths in students and, why they are so prevalent and outliving teaching which challenges them (Posner et al., 1982). Learning involves ideas and is concerned with their structure and evidence (Duit & Treagust, 2001). It is not just a set of correct responses or behaviours (Duit & Treagust, 2001). Therefore, conceptual change theory answers the question on how students' conceptions change due to the influence of new evidence and ideas (Kujawski & Kowalski, 2004).

2.2 Critical Review of Literature

In this literature review, the following themes such as psychological myths, introduction to psychology course, and South African versus a Western perspective would be discussed. The literature shows that psychological myths are prevalent and that a psychology course could possibly have an impact depending on teaching techniques

and how many courses a student has taken. It is noted that a South African perspective could be different to a Western perspective as it is a multicultural society.

2.2.1 Psychological myths

Psychological myths pose a challenge to educators as they are resistant to extinction (Lambe et al., 2003). However, the consensus on what the most common myths are depends on the researcher because the findings differ in the literature. According to Gardner and Brown (2013), they have found that the most common psychological myths fall under the subheadings brain and behaviour, psychological treatment, memory, intelligence and learning, and mental illness. The two subcategories, brain and behaviour and memory have the highest mean (average) of 3.16. The highest rated myth fell under the memory category which states, “some people have true photographic memories” (Gardner & Brown, 2013, p. 213). This psychological myth scored a mean of 4.2 in Gardner and Brown’s (2013) research. A result of 4.2 shows that the myth is the most common in the research. However, Gardner and Brown’s (2013) questionnaire has a limitation as they did not use deception in their study which allows for participants to actively look for psychological myths which creates another variable in their research findings. Both studies from Higbee and Clay (1998) and Swami (2012) focused on the category brain and behaviour with the myth of only using 10% of one’s brain power, scoring the highest mean (average). The research conducted by Higbee and Clay (1998) and Swami (2012) agrees with Gardner and Brown (2013), as his findings stated that brain and behaviour was a high rated psychological myth category. It is important to know that common myths will differ throughout the literature as most of the research was done in North America with university students. This could have an impact on the prevalence of psychological myths which will be discussed in the South African versus Western perspective theme below.

2.2.2 Introduction to psychology course

The students that come equipped for lectures with accurate pre-existing knowledge show a greater understanding and retention of new information than students with

inaccurate knowledge (Posner et al., 1982). Those students with inaccurate beliefs find it difficult to learn new concepts according to the conceptual change theory as the new information needs to be credible to the student before they accept and change their beliefs (Posner et al., 1982). Moreover, before students attend classes, they hold a spectrum of incorrect beliefs or core ideas around their field of study such as Psychology (Lambe et al, 2003). Gardner and Brown (2013), discovered that an introduction to psychology course made no significant difference to the students and the prevalence of psychological myths. The psychology students still believed the same amount of myths as those who did not take a psychology course (Gardner & Brown, 2013). However, Lambe et al (2003) state that an introduction to psychology course does have an impact on the prevalence of psychological myths. This could be due to the teaching strategies of the university where they conducted their research. The main focus of the university's introduction to psychology course was to promote critical thinking. Furthermore, psychological myths decreased when the number of psychology courses a student attended increased (Lambe et al., 2013). This finding by Lambe et al. (2003) shows that the university was instilling critical thinking skills in the students through the introduction to psychology course as well as the more knowledge the student gained, the more they knew about the correct psychological information. However, the results from Lambe et al. (2003) are older than five years which means the education could have changed when Gardner and Brown (2013) conducted their research study.

The research from Standing and Huber (2003) differs to Gardner and Brown (2013) but, concurs with Lambe et al (2003). An introduction to psychology course in North America focuses on scientific thinking, but specialised psychology courses involve speculated material which is presented by lecturers teaching in their hobby areas (Standing & Huber, 2003). In South Africa, there are variations in in what is covered in an introductory psychology course as opposed to a North American university (UCT, 2020). These courses did not focus on methodology but rather on application of the material (Standing & Huber, 2003). This was significant as it impacts the prevalence of psychological myths as methodology creates critical thinking skills which could impede

psychological myths, whereas application to material was about understanding the theory (Standing & Huber, 2003). According to Bensley, Lilienfeld and Powell (2014) the students who took an introduction to psychology course scored a mean (average) of 18.4 which is slightly higher than those who did not with a mean of 16.81. The results of this finding mean that an introduction to psychology course did have a small impact on the beliefs in psychological myths, but it was not statistically significant. Bensley et al. (2013) agreed with Lambe et al. (2013) and Standing and Huber (2003) as there were larger improvements in senior psychology students which is associated with taking more psychology courses. In conclusion, one psychology course may not be enough to make an impact on the prevalence of psychological myths. The researchers could have had varying results as they used different psychological myth questionnaires as well as conducted their research in various North American universities such as the University of Colorado.

2.2.3 South African versus international contexts

Most of the research conducted on psychological myths is from North America which has a Western perspective which is individualistic in nature (Taylor, 2004; Kowalski, 2009; Blessing, 2010). Individualism forms part of different cultures which are mostly European (Sigelman & Rider, 2018). Those who are individualistic mainly care about themselves over the group such as choosing the university they want to attend; over what their family thinks they should go to (Sigelman & Rider, 2018). For example, Kowalski (2009) and Taylor (2004) conducted their research at the University of San Diego which is North American and mostly individualistic. McCutcheon and Furnham (1993) conducted a study on the differences between North American and British students and their beliefs in psychological myths. Although, both American and British students believed in the myths, British learners were more sceptical and answered the questions more correctly than the North American students (McCutcheon and Furnham, 1993). This study shows that there is a difference between different countries and beliefs in psychological myths (McCutcheon and Furnham, 1993). The students from both America and Britain are mostly Westernised and individualistic in thinking (Sigelman & Rider, 2018). This impacts the belief in myths as the way Westernised

students gain information would be more through the media, as individualistic thinkers like to be original in their thought processes.

Individualists would decode messages from the media using their own perceptions which are flawed and would not be sceptical about the information they are receiving. Therefore, a problem arises when applying a Western perspective to a South African perspective as it is a country with a lot of diversity in culture and ethnicities. Those who are from an individualistic culture are socialised to put their goals ahead of the group's goals (Sigelman & Rider, 2018). Whereas, a collectivistic culture, people give group goals and relationships a higher priority than their personal goals (Sigelman & Rider, 2018). Therefore, South Africa could be impacted by psychological myths differently to North Americans due to it being a multicultural society.

South Africa has both individualistic and collectivistic cultures. The way a participant views the world would influence the way they receive information and would impact the results on the psychological myths questionnaire (Kail, Cavanaugh, & Muller, 2019). In a South African perspective, White people are mostly brought up with an individualistic culture which means being independent and unique to other people (Teresa et al., 1994). African and Indian people come from a collectivistic culture which means being interdependent with others (Teresa et al., 1994). The collectivistic culture is what the group thinks and what a participant from a collectivistic culture would believe (Sigelman & Rider, 2018). Thus, psychological myths can be passed down from elders in the family which is by word of mouth that could lead to the perpetuation of myths (Swami, 2012). This could be considered as to how myths could be perpetuated such as through education (Gardner & Brown, 2013). It is important to note that culture does not determine one's critical thinking capacity which can prevent psychological myths from being perpetuated (Swami, 2012).

However, South Africa being multicultural does have a society where individualistic and collectivistic cultures become entwined (Bowman, Naidoo, Pillay & Roos, 2013). This means that individualistic and collectivistic cultures are not separate entities as most

South Africans incorporate different aspects from the groups (individualistic and collectivistic) into their own culture (Bowman et al., 2013). For example, traditional practices are combined with a westernised flair such as African women wanting two weddings as it incorporates the traditional and westernised culture. North Americans are more likely to get their beliefs through social media (Gardner & Brown, 2013). Whereas, South Africans are multicultural which makes it complicated to find where psychological myths are coming from and whether or not an introductory psychology course would affect the prevalence of these beliefs.

In conclusion, the literature review goes on to discuss what the common myths are and how different research has established their own common myths. A psychology course could have an impact according to the literature. However, it is a small impact and a student may have to take more than one psychology course in order to stop the prevalence of myths. This finding may have a link to critical thinking as it makes one sceptical about the information being received. A South African perspective would possibly have an influence on the prevalence of myths due to it being a multicultural society. In South Africa, there could also be a difference in teaching techniques which could impact the beliefs in psychological myths thus, more research of this nature is needed in a South African context.

2.3 Conceptualisation

2.3.1 Critical Thinking

Smith (2002, p. 126) defines critical thinking as, “the skills used to engage in an activity with scepticism focused on deciding what to believe or do.” For example, critical thinking in a psychology course would involve listening and engaging in the course content with a level of scepticism. It is also a skill that is taught in a psychology course through particular activities such as homework tasks. This applies to the research study as change will occur (as theorised by conceptual change theory) when the student uses critical thinking. When the student realised that they have incorrect concepts (beliefs) and used critical thinking to gain the correct psychological information, they then

changed these old concepts and become more sceptical with the information they received. Therefore, critical thinking could disrupt the belief in myths which is what my research aims to investigate.

2.3.2 Psychological Myths

Psychological myths are defined as “beliefs that are held contrary to known evidence” (Taylor & Kowalski, 2014, p. 15). Some of the commonly held myths for example are being right-brain dominant which means one is creative and left-brain dominant being more logical. This was a myth because science has proven that every human being uses both sides of the brain due to the corpus callosum (Cacioppo & Freberg, 2016). This concept applied to the study as the psychological myths are grouped into specific categories which each student will rate whether they believe the myth or not. This was relevant to the research study as it helps determine if a psychology course had an impact on the belief of myths. The psychological myths for this research study were grouped into categories from the Gardner and Brown (2013) study which are memory, mental illness, intelligence and learning, and brain and behaviour. These psychological categories would be discussed below.

2.3.3 Memory

Siegelman and Rider (2018, p. 235) defined memory as the, “process of retaining information over time and is the ability to use our past experiences to determine our future path.” Memory can be broken up into three types which are sensory, short-term and long-term memory (Sigelman & Rider, 2018). Sensory memory is the information from the environment that lasts for seconds (Kail et al., 2019). Short-term memory lasts for a short period of time with a limited amount of information (Kail et al., 2019). Long-term memory is mostly permanent and seems to be an unlimited store of information (Kail et al., 2019). Memory is a category which has certain psychological myths attached to them which is tested in the questionnaire. An example of one of the psychological myths is that some people have true photographic memories. This is a

myth since a photographic memory has not been proven to exist (Gardner & Brown, 2013).

2.3.4 Mental illness

Mental illnesses are health conditions that involve dysfunctional changes in emotion, thinking or behaviour (Manderscheid, Ryff & Strine, 2009). It is associated with distress or problems with functioning in daily life (Manderscheid et al., 2009). In the Gardner and Brown (2013) questionnaire, mental illness is a category under which some psychological myths questions fall under. These psychological myths may create stigma's and stop those with mental illness from seeking treatment. For example, there is a myth that all clinically depressed people suffer from extreme sadness (Gardner & Brown, 2013). This continues to serve as a myth because people with depression have many other emotions other than sadness (Barlow et al., 2017). Depression does not go away with time like sadness does (Barlow et al., 2017).

2.3.5 Intelligence and learning

Intelligence could be defined by Sternberg as, "mental activity directed toward purposive adaptation to, selection and shaping of, real world environments relevant to one's life in achieving meaningful goals, given one's cultural context" (Antonio, Lanawati & Wirianac, 2014, p. 256). Therefore, Sternberg viewed intelligence as how well the individual adapted to the environmental changes throughout their life (Antonio et al., 2014). Sternberg views intelligence as multidimensional construct which translates to real life success and not just related to analytical ability (Kail et al., 2019). Learning is gaining knowledge through study, experience or being taught (Sigelman & Rider, 2018). Intelligence and learning are linked as one cannot happen without the other (Sigelman & Rider, 2018). In the Gardner and Brown (2013) questionnaire on psychological myths, intelligence and learning is a category which some myths fall under. The questions focus on beliefs around IQ, reinforcement and being able to recall information that is read. For example, an intelligence and learning myth is that as a general rule, students typically recall only 10% of what they read. This is a myth as learning depends on

numerous variables, therefore, there are no precise answers on how much a human can recall from reading (Lilienfeld et al., 2011).

2.3.6 Brain and behaviour

Brain and behaviour are linked together as one cannot exist without the other (Sigelman & Rider, 2018). The brain is made up of neurotransmitters which create specific behaviours in an individual (Sigelman & Rider, 2018). The subheading brain and behaviour was included in Gardner and Brown's (2013) questionnaire of psychological myths. An example of a brain and behaviour myth would be some people are exclusively left-brained while others are right-brained. This has been proven to be a myth through research proving lateralisation in the brain (Cacioppo & Freberg, 2016).

3. RESEARCH DESIGN AND METHODOLOGY

3.1 Research Paradigm

This research study used a positivist paradigm as the study aims to investigate whether a psychology course has an impact on the belief of myths. The epistemological assumption for this research was that measurable data would allow for the determination whether a psychology course had an effect on the prevalence of myths. This study's epistemology embraced measurable data which was gathered from the questionnaire because it used the participant's answer to each question, without considering their interpretation of the question. The ontological assumption guiding this study was that there is one objective reality and there is a belief in psychological myths or not. The positivistic stance is that reality is discoverable (du Plooy-Cilliers, Davis, & Bezuidenhout, 2014). How one can discover reality was by establishing if there was an effect on an object such as whether a psychology course had an influence on the belief of psychological myths. Thus, the data collected would be free from researcher bias. This positivistic research values objectivity, measurability and value-free research (du Plooy-Cilliers et al., 2014). This would be achieved through the use of a questionnaire that would be free from researcher bias to determine if a psychology course had an impact on the belief of myths.

3.2 Research Design and Conceptual Approach

This research was considered deductive as the research study has a hypothesis on whether a psychology course had an impact on the belief of myths. For this research study, existing theories presented in the literature have been investigated. The research study used descriptive analysis to determine the answers for each question and draw conclusions. The study has a specific hypothesis such as a psychology course will decrease the belief in psychological myths in university students. From this hypothesis, would either be accepted or rejected. The research findings would describe whether the psychology course had an effect on the belief of psychological myths in students, or not based on the participants' responses to the questionnaire. The non-experimental design has variables that are selected to be measured through the use of the questionnaire at a specific time. There will be no manipulation taking place in the research study. This study uses a cross-sectional design as the questionnaire will be completed once by the participants and results will be drawn. The study examined the belief in psychological myths and the impact a psychology course had, at one point in time and a conclusion was drawn.

3.3 Population and Sampling

3.3.1 Units of analysis

Individual student's beliefs in psychological myths.

3.3.2 Population

South African, 18-25 years old, university students, from the KZN province who had taken at minimum an introductory course in psychology.

3.3.3 Sample

Drawing 20 university students who have at minimum participated in an introductory to psychology course that are available to answer the questionnaire (see Appendix C) online. The axiology of this research study values objectivity which a large sample of 20 participants can provide. The sampling method for this research study is probability sampling and the specific method used is simple random sampling. The research study

used probability sampling as every participant needs an equal opportunity to be a part of the sample. Simple random sampling removes researcher bias as it involves strict step-by-step procedures such as just putting the questionnaire on Facebook with instructions for participants and includes anonymity, so the researcher does not know who they are. This type of sampling can lead to generalisable findings that fit in with the research study's parameters reference. A link for the questionnaire was shared on Facebook and the first 20 completed questionnaires were used for this study. The recruitment process involved sharing the link for the psychological myths questionnaire on Facebook and waiting for students to respond to it.

3.4 Data Collection Methods

A questionnaire from the research of Gardner and Brown (2013) was used. The questionnaire involved psychological myths from 4 categories which are memory, mental illness, intelligence and learning, and brain and behaviour (see Annexure C). The questionnaire was distributed on Facebook using Google forms as a tool to create the questionnaire. The link was shareable on the researcher's Facebook to get a wider reach and the first 20 questionnaires was used. This required little/no influence from the researcher. It was a good method to get clear and concise answers without taking too much time from the participants, which could cause measurement error. Measurement error could occur when participants are tired and bored with answering the questionnaire, therefore, a short questionnaire that is clear and concise was used.

Measurement error is when certain variables such as the participant being bored influences the results causing them to be further from the true value (results) (du Plooy-Cilliers et al., 2014). This applied to the research study as the findings need to be as valid and reliable as possible because it offers perspective from a South African context. The psychological myths questionnaire provided an overall perspective on psychological myths instead of focusing on one specific category which could yield better results as some myths can be more prevalent than others. In Gardner and Brown's (2013) research they could see which categories had a higher average over others for example memory myths. However, both studies from Higbee and Clay (1998)

and Swami (2012) focused on the category brain and behaviour which means they only got results for one category. This does not provide an overall view of which psychological myths are more common which other literature focuses on.

3.4.1 Application of data collection method

3.4.1.1 Participants

A total of 20 students from universities in KZN participated in the study. However, the participants are anonymous so there likely was a mixture of female and male students being represented. The educational requirements for participation, is at least a completion in one psychology course. This means a variation in educational levels within the Psychology field which could have an impact on the findings.

3.4.1.2 Measure

The 16-item questionnaire was adapted from the 55-item questionnaire of Gardner and Brown (2013). There were 4 categories outlined by Lilienfeld et al. (2010). The 4 categories were brain and behaviour, memory, intelligence and learning, and mental illness. Some of the questions were true statements and the other half were false. The responses were coded on a 6-item Likert scale with options of “strongly disagree”, “moderately disagree”, “slightly disagree”, “slightly agree”, “moderately agree”, and “strongly agree”.

3.4.1.3 Procedure

The questionnaire was created on Google forms and distributed via a link on Facebook. Above the link, were criteria stating that the participant filling in the questionnaire needed to be a South African, KZN, university student between the age of 18-25 who has participated in a psychology course. If they fitted these criteria, they would then click onto the link in order to respond to the questionnaire. The questionnaire used deception with the title stating that it was “an investigation of the state of knowledge about psychology questionnaire”. The students were told that participation was voluntary and that there was no compensation for their participation. The questionnaire took approximately 5 minutes to complete. At the end of the questionnaire, the

participant was provided a debriefing on why deception was used in the research study and what the real purpose of the study was about. The participant was provided the answers to the questionnaire so that it could educate them on what statements were false/myths and what statements were true.

3.5 Data Analysis Methods

The raw data was collected and captured onto the computer through the use of a programme such as Excel. Descriptive statistics were used for the data analysis method in the research study. Descriptive analysis organised and summarised the data which could be displayed in a graphical or numerical way (du Plooy-Cilliers & Bezuidenhout, 2014). This type of analysis could be used in qualitative and quantitative research, however, the main focus for this study was quantitative data (du Plooy-Cilliers & Bezuidenhout, 2014). The use of quantitative descriptive studies helped establish the trends of the data such as the mean, median, mode, standard deviation, maximum and minimum, and skewness (Howitt & Cramer, 2017). The numerical way to describe the distribution of data was the mode and mean (Howitt & Cramer, 2017). The mode is the value that occurs most frequently (Howitt & Cramer, 2017). However, it does not always describe the distribution accurately (Howitt & Cramer, 2017). There may be more than one value with the highest frequency which can be multimodal (Howitt & Cramer, 2017). The mean is the average of the data set which is a good description of the central tendency (Howitt & Cramer, 2017). The percentage is used to show a value within a group of respondents (Personal Communication, Ameer, August 2020). Frequency is similar to the mode; however, it expresses how many respondents used that value in the questionnaire (Personal Communication, Ameer, August 2020). The range is the highest and lowest value of the set of data (Personal Communication, Ameer, August 2020).

3.5.1 Application of analysis method

3.5.1.1 Data validation

The present research study questionnaire was set up as a qualifier in the researcher's Facebook link. The link had no bias and was open to everyone that fitted the specific category. The researcher introduced the link and stated that the participant must be between the age of 18-25 years of age and participated in a psychology course which ensures they fit the pre-validated data. The study is free from bias as anyone who fitted the above requirements could participate as it does not take into account race or religious factors.

3.5.1.2 Data editing

The researcher used Google forms to collect the data from the participants. The questionnaire on Google forms was in the form of a 6-point Likert-scale. The questions were grouped into 4 categories which were brain and behaviour, memory, intelligence and learning, and mental illness. Some of the questions were true statements and the other half were false. The responses were coded on a 6-item Likert scale with options of "strongly disagree", "moderately disagree", "slightly disagree", "slightly agree", "moderately agree", and "strongly agree". The questionnaire was setup in such a way that participants would not be allowed to skip any of the questions which minimised any errors or inconsistencies in the data collection process. Once the participant had finished answering the questionnaire, the answers were provided to the questions as well as an explanation to why deception had been used in the study.

The researcher analysed the questionnaires that were answered by marking all the questions that the participants answered correctly and incorrectly. The data was captured on Microsoft excel which calculated the M, mode, percentage, frequency and range.

3.5.1.3 Populating the data into Excel

The raw data was captured into an excel spreadsheet. The researcher set up her data spreadsheet that on the vertical axis it showed the participants numbered from P1- P20. The horizontal axis in different columns going down, had the different questions from the 16-item questionnaire. The questions were as follows: Most people only use 10% of their brain power; adults can grow new brain cells; colour-blind people can see at least some colours; some people are exclusively right-brained, and others are left-brained; it is not common for individuals to repress memories of traumatic events; we can remember events back from the time of our birth; some individuals have photographic memories; people with amnesia can recall some details of their early life; IQ scores are not stable in childhood; there is a relationship between brain size and IQ in humans; negative reinforcement is a type of punishments; students only recall 10% of what they read; only deeply depressed people commit suicide; people with schizophrenia do not have multiple personalities; people who experience severe trauma (war) do not develop post-traumatic stress disorder; and all clinically depressed people suffer from extreme sadness. Each participant's response was added to each question.

3.5.1.4 Descriptive statistics

The numerical distribution which includes the mode, mean, percentage, frequency and range had been used for the research study as it aligns with the research purpose and hypothesis. The mean established the average for each category in the questionnaire which are brain and behaviour, memory, intelligence and learning, and mental illness. The averages would, therefore, show if the psychology students believed more in one category over another category. The mode would show the highest value for each item relating to the Likert-scale. For example, question one had participants answering number 6 which was strongly agree to the statement of "Most people only use 10% of their brain power". This showed that the participants did believe the psychological myth presented to them in the questionnaire. After the modes for each item were established; results could be concluded to determine if the participants believed in the myths or did not. The frequency showed how many participants voted for the mode in each question

in the 16-item questionnaire. For example, question 1 had 6 as the highest mode. This meant that 8 out of 20 people in the study voted for 6 on the scale which mean they strongly agreed to the question. The percentage showed how many participants strongly agreed and strongly disagreed to each question. For example, question 1 had 5 participants who voted for 5 which was agree and 8 participants who voted for strongly agreed. Both agree and strongly agree were added together and created the percentage of 65% of the respondents agreed to this question. Therefore, 35% of the participants did not agree to the statement. The range was used for each question. For example, in question 1 the highest value was 6 and the lowest value was 1. This created the range of 5.

The findings from the study could conclude whether the psychology courses had an impact on the beliefs of the psychological myths. The mean would be calculated for each category of myth which was explained above such as brain and behaviour, memory, intelligence and learning, and mental illness. The results from the 16-item questionnaire categories would be compared to the findings of Gardner and Brown's (2013) same four categories. This was to determine if the South African context had an influence on the beliefs of psychological myths and whether the South African participants scored lower or higher in certain categories compared to the Western participants.

4. FINDINGS AND INTERPRETATION OF FINDINGS

4.1 Presentation of the Findings

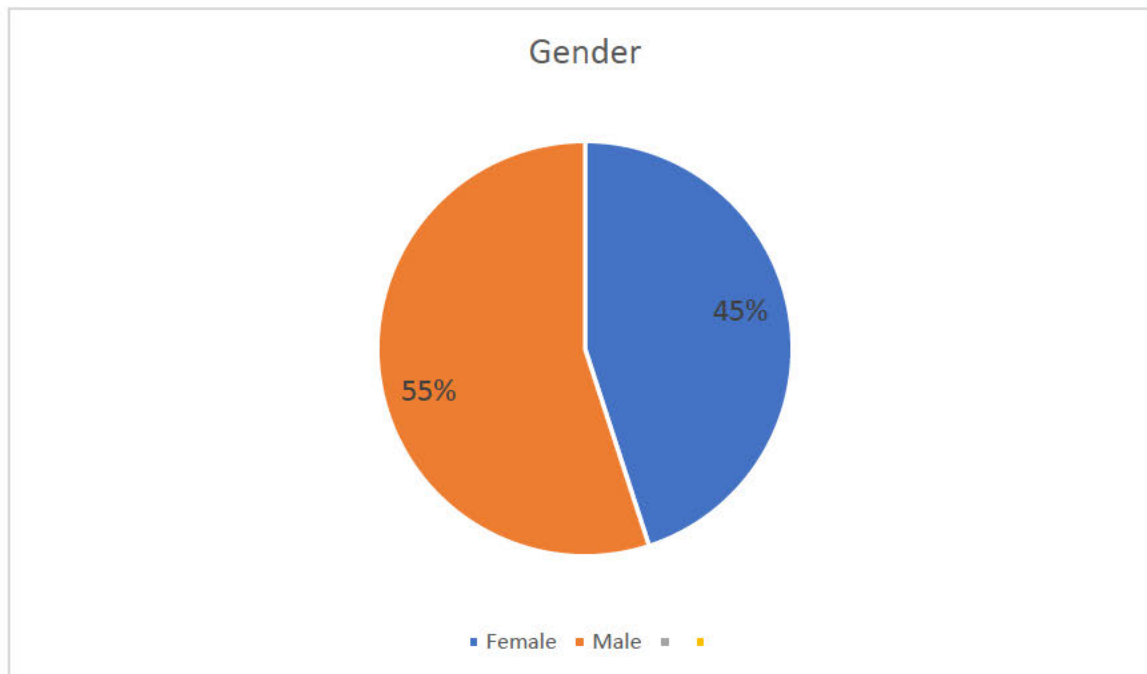
A questionnaire was created relating to the objectives of the study, using a Likert-scale which measured how much a participant agreed or did not agree to the statements that were asked. The first 20 respondents were chosen.

4.2 Sample Demographics

Demographical information section for the questionnaire was compulsory to all respondents. The categories that were included in the demographic section were age,

gender and level of education. The questionnaire was shared on the researcher's Facebook platform which contained a statement on the top of the link which required participants to be in the age category of 18-25 years, in university, having completed at minimum an introductory level psychology module/course, and from the KZN province. The following figures demonstrate the demographics of the respondents.

Figure 1.1 Gender of the participants



The pie-chart reveals that there were more males than females who participated in the study. Fifty-five percent of the sample were males and forty-five were females who answered the questionnaire.

Figure 1.2 to show age distribution of the participants

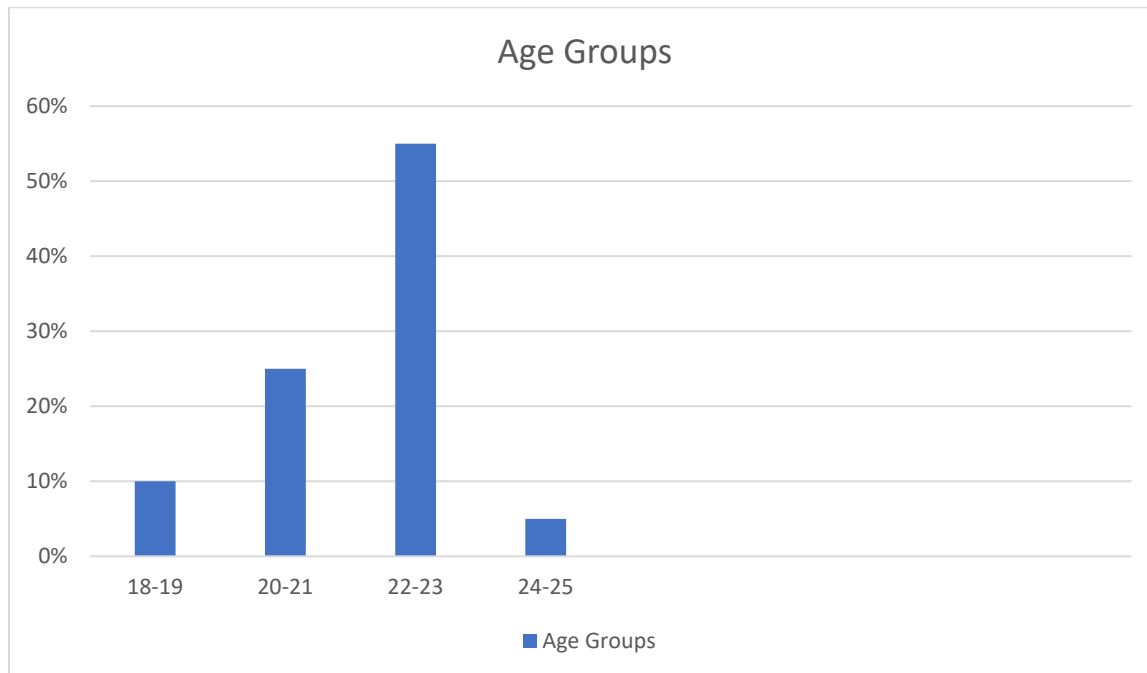


Figure 1.2 shows that the dominant age group is 22-23 followed by 20-21, followed by 18-19 and lastly the age group 24-25. This shows that the questionnaire is mostly dominated by participants who are between 22-23 years of age.

Figure 1.3 displays the year of university the participants are in

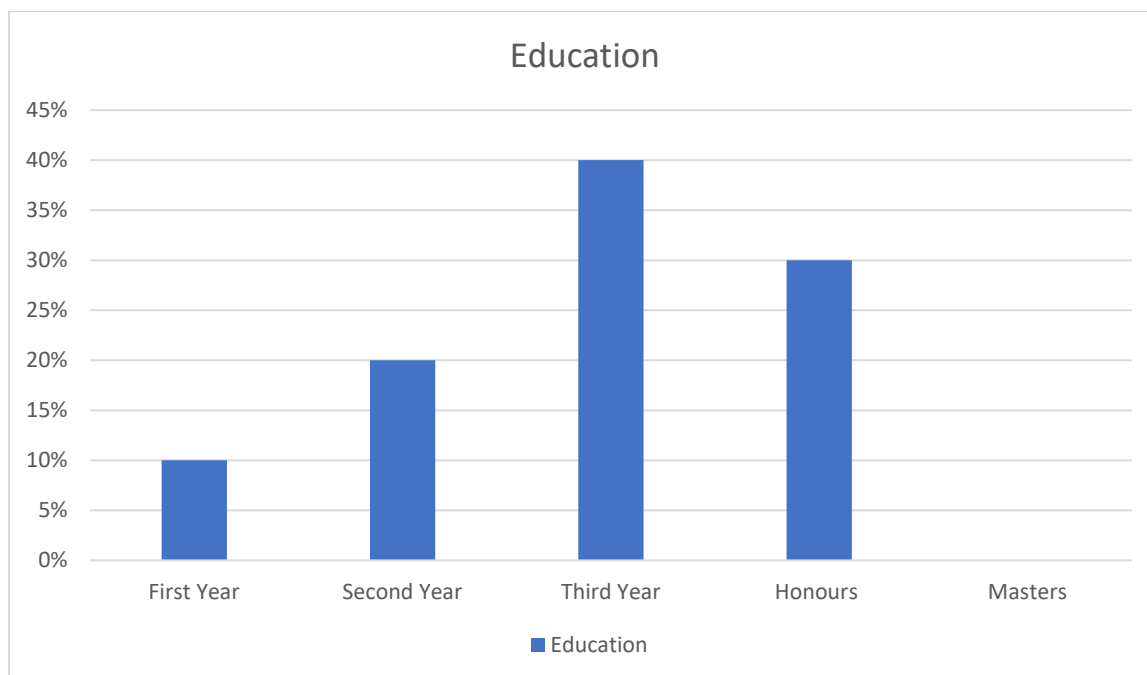


Figure 1.3 displays the year in which the participants are in university. Most of the study is dominated by third year students (40%). The second dominant group is Honours students (30%) followed by second years (20%) followed by first years (10%) and lastly no masters participants (0%). This shows that most of the participants are in their final year of their degree or are in their honour's year.

Table 1 Misconceptions in Psychology Questionnaire

	Mean misconception (larger mean reflects higher misconception)
Most people only use 10% of their brain power	4.3
Adults can grow new brain cells*	3.1
Colour-blind people can see at least some colours*	2.0
Some people are exclusively right-brained, and others are left-brained	3.7
It is not common for individuals to repress memories of traumatic events*	4.9
We can remember events back from the time of our birth	2.6
Some individuals have photographic memories	5.5
People with amnesia can recall some details of their early life*	2.3
IQ scores are unstable in childhood*	2.6
There is a relationship between brain size and IQ in humans*	4.2
Negative reinforcement is a type of punishment	4.1
Students only recall 10% of what they read	3.7
Only deeply depressed people commit suicide	1.7
People with schizophrenia do not have multiple personalities*	3.8
People who experience severe trauma (war) do not develop posttraumatic stress disorder*	5.9

All clinically depressed people suffer from extreme sadness	2.9
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* Indicates true statements which are reverse scored.

The researcher reversed scored the items written as true statements, so that the higher scores represented stronger beliefs in the myths. The reverse statements were 2, 3, 5, 8, 9, 10, 14, and 15. Most of the participants believed the statement that “People who experience severe trauma (war) do not develop posttraumatic stress disorder” which had a $M = 5.9$. This shows that the participants answered correctly to this statement as it was not a myth. However, participants also believed strongly in the myth, “some individuals have photographic memories,” which had a $M = 5.5$. In contrast, the myth that was least believed was, “only deeply depressed people commit suicide” which had a $M = 1.7$.

- **Statement one: Most people only use 10% of their brain power**

Thirteen participants chose to strongly agree with a percentage of 65% of respondents choosing this option. This statement has a $M = 4.3$.

- **Statement two: Adults can grow new brain cells**

Nine respondents chose to strongly disagree. The percentage of the participants choosing option one on the Likert-scale was 45%. This statement has a $M = 3.1$.

- **Statement three: Colour-blind people can see at least some colours**

Fifteen participants chose to strongly disagree to the statement which is 75% of the total number of responses. This statement has a $M = 2.0$.

- **Statement four: Some people are exclusively right-brained, and others are left-brained**

Eight respondents opted for strongly agree which is 45% of the participants. This statement has a $M = 3.7$.

- **Statement five: It is not common for individuals to repress memories of traumatic events**

There were 16 participants which made 80% of the participants who selected to strongly agree. This statement has a $M=4.9$.

- **Statement six: We can remember events back from the time of our birth**

Twelve respondents chose to strongly disagree to statement six with the percentage of 60%. This statement has a $M=2.6$.

- **Statement seven: Some individuals have photographic memories**

Eighteen respondents opted to strongly agree with the percentage of 90%. This statement has a $M=5.5$.

- **Statement eight: People with amnesia can recall some details of their early life**

Fifteen respondents chose to strongly disagree with the percentage of 75%. This statement has a $M=2.3$.

- **Statement nine: IQ scores are not stable in childhood**

Ten participants selected the strongly disagree option with the percentage of 50%. This statement has a $M=2.6$.

- **Statement ten: There is a relationship between brain size and IQ in humans**

Ten participants voted to strongly agree with the percentage of 50%. This statement has a $M=4.2$.

- **Statement eleven: Negative reinforcement is a type of punishment**

Ten respondents chose to strongly agree to statement eleven with the percentage of 50%. This statement has a $M=4.1$.

- **Statement twelve: Students only recall 10% of what they read**

Seven participants selected for strongly agree with the percentage of 35%. This statement has a M=3.7.

- **Statement thirteen: Only deeply depressed people commit suicide**

Seventeen respondents voted strongly disagree to this statement, with the percentage of 85%. This statement has a M=1.7.

- **Statement fourteen: People with schizophrenia do not have multiple personalities**

Ten participants opted for strongly agree which was 50%. This statement has a M=3.8.

- **Statement fifteen: People who experience severe trauma (war) do not develop post-traumatic stress disorder**

Nineteen respondents which is 95% in total, strongly agreeing to the statement. This statement has a M=5.9.

- **Statement sixteen: All clinically depressed people suffer from extreme sadness**

Ten respondents which is 50% chose to strongly disagree with this statement. This statement has a M=2.9.

The average overall misconception rating was M= 3.6, where the rating of one represents the belief in which the statement is completely false and six represents the belief in the misconception to be completely true. Table 1 shows the average misconception level for each statement. The overall average shows that the respondents found the statements to be partially true than false. Therefore, a psychology course did not prevent the beliefs in psychological myths.

Table 2 Average Misconception Rating by Topic

Topic	M
Memory	3.8
Mental illness	3.6
Intelligence and Learning	3.7
Brain and Behaviour	3.3

Each question was put into a category using Gardner and Brown (2013) as a guideline. The findings of each rating average per a misconception topic are brain and behaviour M=3.3, memory M=3.8, intelligence and learning M=3.7, and mental illness M=3.6. Memory obtains the highest rating while brain and behaviour obtained the lowest rating. According to Gardner and Brown (2013) their study had the M=2.9 which shows that their study had a lower belief rate than this study.

From a methodological viewpoint, the study has good internal consistency. It discriminates the misconceptions between the topics in psychology. This study was based off the Gardner and Brown (2013) study which included some of the popular myths described in Lilienfeld et al. (2011).

4.2 Interpretation of Findings

- **Statement one: Most people only use 10% of their brain power**

By this statement having a M=4.3, it shows that most of the participants believed this myth to be true.

- **Statement two: Adults can grow new brain cells**

Statement two was true and reversed scored. This statement has a M=3.1 which shows that the participants did not believe adults could grow new brain cells.

- **Statement three: Colour-blind people can see at least some colours**

This statement is true and reversed scored. It has a M=2.0 which shows that the respondents knew that colour-blind people can see at least some colours.

- **Statement four: Some people are exclusively right-brained, and others are left-brained**

This statement has a $M=3.7$ which shows that the participants believed the myth to be true.

- **Statement five: It is not common for individuals to repress memories of traumatic events**

This statement was reversed scored and has a $M=4.9$. This means that the participants thought this statement was not true.

- **Statement six: We can remember events back from the time of our birth**

This statement has a $M=2.6$ which shows that the respondents did not believe this myth and partially disagreed.

- **Statement seven: Some individuals have photographic memories**

This statement has a $M=5.5$, which means that the participants strongly agreed to this myth.

- **Statement eight: People with amnesia can recall some details of their early life**

This statement is reversed scored and a true statement. The $M=2.3$ shows that respondents believed this statement to be correct and not a myth.

- **Statement nine: IQ scores are not stable in childhood**

This statement is reversed scored and has a $M=2.6$. The finding shows that the participants knew it was a true statement, therefore, creating a low mean.

- **Statement ten: There is a relationship between brain size and IQ in humans**

This statement was reversed scored and has a $M=4.2$. This shows that participants did not believe this statement to be true.

- **Statement eleven: Negative reinforcement is a type of punishment**

This statement has a $M=4.1$ which shows participants believed this myth to be partially true.

- **Statement twelve: Students only recall 10% of what they read**

This statement has a $M=3.7$ which shows the respondents believed in the myth slightly, but it is not a strong belief.

- **Statement thirteen: Only deeply depressed people commit suicide**

17 respondents voted strongly disagree to this statement, with the percentage of 85%. This statement has a $M=1.7$.

- **Statement fourteen: People with schizophrenia do not have multiple personalities**

This statement was reversed scored and has a $M=3.8$ which shows that most participants believed this statement to be partially false, although it is a true statement.

- **Statement fifteen: People who experience severe trauma (war) do not develop post-traumatic stress disorder**

This statement was reversed scored and a true statement with a $M=5.9$. Therefore, participants believed this statement to be incorrect and that people who experience severe trauma will definitely develop post-traumatic stress disorder.

- **Statement sixteen: All clinically depressed people suffer from extreme sadness**

This statement has a $M=2.9$ which shows that participants did not believe this myth and believed it was partially false.

The research from Gardener and Brown (2013) showed that the students were more sceptical towards the myths than the students from the KZN province. This means that

overall, Westernised students believed in less myths than South African students from the KZN province. Due to this finding, it could mean that the South African education system is different to the Westernised education system, therefore, impacting the prevalence of beliefs.

It cannot be assumed that this study covers all myths within the psychological field. The research purpose was to determine the effects that a psychology course has on the beliefs of psychological myths. However, the study was not able to distinguish the level of psychology in students which meant that further conclusions could not be drawn. The researcher has rejected their hypothesis as a psychology course did not impede the prevalence of myths in students.

4.3 Findings in Context

4.3.1 Psychological myths

This study has confirmed what most of the literature has stated. According to Gardner and Brown (2013) they have found that the most common psychological myths had fallen into the subheadings brain and behaviour, psychological treatment, memory, intelligence and learning, and mental illness. The two subcategories, brain and behaviour and memory have the highest mean of 3.16. The highest rated myth fell under the memory category which states, “some people have true photographic memories” (Gardner & Brown, 2013, p. 213). However, this research discovered that the memory category has the highest mean of 3.8 but the second highest category was intelligence and learning, not brain and behaviour. This finding of brain and behaviour scoring the lowest mean out of all the categories has shown that the students from South Africa, KZN province are different to the students from the research of Gardner and Brown (2013), Higbee and Clay (1998) and Swami (2012). The research from Higbee and Clay (1998) and Swami (2012) focused mainly on brain and behaviour with the myth of only using 10% of one’s brain power, scoring the highest mean. The participants from this study also believed this myth to be true scoring a M=4.3 which was the highest rating out of the brain and behaviour category.

4.3.2 Introduction to psychology course

Gardner and Brown (2013), discovered that an introduction to psychology course made no significant difference to the students and the prevalence of psychological myths. The psychology students still believed the same amount of myths as those who did not take a psychology course (Gardner & Brown, 2013). Lambe et al. (2003) research had also discovered the same results. This study agrees with Gardner and Brown (2013) and Lambe et al. (2003) research. The Mean was 3.6 in this study which shows that the participants believed in the myths. Therefore, a psychology course did not change the beliefs in myths.

4.3.3 South African versus international contexts

McCutcheon and Furnham (1993) discovered that the British students believed in less myths than North American students. However, this study discovered that South African students from the KZN province believed in more psychological myths due to the mean of each category being higher than categories stated in Gardner and Brown (2013), McCutcheon and Furnham (1993), Swami (2012), Higbee and Clay (1998) and Lambe, et al.'s (2003) studies. However, the mean for each category was not significantly higher than the averages from previous international studies. This means that the South Africa context could have various factors influencing the prevalence of myths, but it is not clear and what the variables could be.

4.4 Reliability and Validity

The questionnaire from Gardner and Brown (2013) has established reliability and validity in their study. This is a strength to this research study as it uses an adapted version of Gardner and Brown (2013) questionnaire.

The misconception scale developed in Gardner and Brown's (2013) study is an instrument with good internal consistency. Therefore, the questionnaire is reliable as it will produce similar results in similar conditions that Gardner and Brown (2013) conducted their research. It discriminates misconceptions between many of the major subfields in psychology (Gardner & Brown, 2013). Since the scale is constructed only

from the 50 popular myths described in the Lilienfeld et al. (2010) research, it cannot be assumed to provide representative coverage of myths within psychological topic areas. This means that the questionnaire is valid, but it can be difficult to make generalisable findings as it does not cover all psychological categories. This has been established in the literature as one cannot find the most common myth as the myths vary throughout the research findings.

The researcher analysed the questionnaire that was answered by marking all the questions that the participant answered correctly and incorrectly. The data was captured on Microsoft Excel which calculated the mean, frequency, and percentage of the answers the participants provided. There were categories for each section: memory, mental illness, intelligence and learning, and brain and behaviour. This was an analytic method used from Gardner and Brown (2013) to ensure the reliability and validity of the questionnaire. This was achieved through the measure and the tools used in calculating the results as it prevents research bias.

The reliability and validity are already established in this study's questionnaire as it had already been determined in Gardner and Brown's (2013) questionnaire. The analysis of the research study is reliable as it uses the Microsoft Excel program which uses predetermined calculations. The study addresses validity since it uses established categories from Gardner and Brown's (2013) questionnaire. A part of Gardner and Brown's (2013) questionnaire was replicated, which further strengthens validity and reliability of this study.

5.CONCLUSION

5.1 Addressing the Research Hypothesis, Problem, and Objectives

The research objectives for this study were partially met, however, the hypothesis was rejected. The findings have stated that a psychology course does not decrease the prevalence of myths as the overall mean of the study has shown that there is a belief. Hence, the hypothesis of an introduction to psychology module will decrease the prevalence of psychological myths in students has been rejected.

The first objective of the study was to determine if a correlation exists between participation in an introductory psychology module and the perpetuation of psychological myths in South African students. This was discussed throughout the research findings and it was clear that a psychology course did not have an impact on the belief of myths in South African students.

The second objective was to determine if a South African context influences the correlation between an introductory psychology module and the beliefs in psychological myths. The study did not answer this objective as it was not clear on what could possibly be the variable causing a belief in myths. The demographics did not take into account the level of psychology course or the educational techniques used in the classroom. Therefore, one cannot say if there was a difference with the South African context to an international one.

5.2 Ethical Implications

The researcher used a form of deception by giving a general purpose for the research, but not telling participants specifically what the researcher was looking for to limit participants looking for myths. If participants were aware that they are participating in a study about psychological myths as well as their awareness on psychological myths it could lead them to actively look for the myths. It could have made them more critical about the psychological myths which was a problem that the study was trying to determine. Therefore, an interfering variable would have been the participant being critical about the statements in the questionnaire which would have influenced the results as the research study was focused on the correlation between a psychology course and the beliefs in psychological myths. The use of deception was to ensure reliable and valid results because the participants would have answered more truthfully because a hint on what the questionnaire was on would have created false answers. The deception was a change in the title of the study and what the researcher was looking for in her research so that the participants did not know what was been determined to measure (see Appendix C). The researcher provided a debrief to the

participants at the end of the questionnaire. In the debrief, the researcher told the participants what the study was actually about, why the researcher saw fit to use deception; as well as provided the answers to the questionnaire once the researcher had collected all the data from the participants.

This type of deception is very unlikely to cause lasting harm to the participants and instead aims to ultimately inform and educate participants, benefiting them in the long-term. The research study ensured anonymity as there is no identifying information for the participant to put on the questionnaire. The participant only has to make sure they fit the target population of the questionnaire by ticking the boxes on the consent form (see Appendix B) which shows they agreed to what the research was asking from them.

5.3 Limitations of the Study

The Covid-19 pandemic has interfered with the present study as only people with internet access could participate. This is a limitation as it excludes certain populations that would have been able to participate before as the questionnaire could have been handed out on different campuses. The questionnaire to the research study was anonymous, and the link was shared on Facebook. The limitation to anonymity in the study, means that anyone could have answered the questionnaire and lied about their age and education level which could have hindered the results.

5.4 Heuristic Value

The study was successful as it was able to answer the research hypothesis and objectives. It was noted that the hypothesis had to be rejected since it did not align with the findings. However, a South African perspective to the study of psychological myths has been provided to the psychology field.

Future studies may want to construct a scale that is a better representative measure of psychological myths as researchers might want to consider a broader range of these myths. The research did not cover all topics of psychological myths, but it should help future studies to explore these topics further. Researchers must take into consideration

having more variables such as gender, level of psychology course, and age which could have an impact on the belief of myths. A larger sample was needed in this study in order to calculate a SD and Cronbach's Alpha.

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Annexure A: Final Research Report Summary Document Table

Purpose/ Objective	Question/ Hypothesis	Rationale	/Sources	Conceptual Framework			Method (s)			
To determine the effects that a psychology course has on the beliefs of psychological myths.	The introduction to Psychology module will decrease the prevalence of psychological myths in students.	The purpose of this study is to compare university students who have taken a psychology course to those who have not. This is to determine if a psychology course has an impact on the belief of psychological myths.	Gardner and Brown (2013), Standing (2003), Lilienfeld (2010), Kujawski and Kowalski (2004), Duit and Treagust (2001), Posner, Strike, Hewson and Gertzog (1982), Lambe, Lyddy and Hughes (2003), Higbee and Clay (1998), Swami (2012), Standing and Huber (2003), Taylor (2004), Kowalski (2009), Blessing (2010), McCutcheon and Furnham (1993), Bowman, Naidoo, Pillay and Roos, (2013)	Theme 1: Psychology course Theme 2: Psychological Myths Theme 3: Western context versus a South African context	Positivist Ontology: Look at why psychological myths are prevalent by comparing those who have done a psychology module and those who have not. This looks at the relationship between the two groups. Epistemology: The study will use a questionnaire using a Likert-Scale for participants to answer. Calculations will be made making the data free from bias.	Quantitative	Questionnaire on Facebook using Survey Monkey	Deception was used. However, a debrief was provided at the end of the questionnaire as well as the answers to the questions.	The KZN students believed in more myths than the international students.	Construct a scale that is a better representative measure of psychological myths as researchers might want to consider a broader range of these myths. The research did not cover all topics of psychological myths, but it should help future studies to explore these topics further. Researchers must take into consideration having more variables such as gender, level of psychology course, and age which could have an impact on the belief of myths. A larger sample to calculate a SD and Cronbach's alpha.
						Population South African tertiary education students from age 18-25 years of age.				
Research Problem	Secondary Questions/ Hypotheses/ Objectives	Key Concepts	Key Theories				Data Analysis (s)	Limitations	Key contribution	
The problem is individuals hold beliefs in psychological myths which are harmful to communities of people who struggle with mental health issues (Standing, 2003).	To determine if a correlation exists between participation in a psychology module and the perpetuation of psychological myths in South African students. To determine if a South African context influences the correlation between a psychology module and the beliefs in psychological myths. Does a correlation exist between participation in a psychology module and the perpetuation of psychological myths in South African students? Does a South African context influence the correlation between a psychology module and the beliefs in psychological myths?	Psychological myth Tertiary education Critical thinking Memory Mental illness Intelligence and learning Psychological treatment Social psychology Brain and behaviour	Conceptual change theory	Axiology: The questionnaire will be handed out on an online platform thus the research remains on an objective stance.	Sampling	Descriptive analysis organised and summarised the data which could be displayed in a graphical or numerical way (du Plooy, Cilliers & Bezuidenhout, 2014).	The Covid-19 pandemic has excluded certain populations who do not have internet access. Anonymity in the study, means that anyone could have answered the questionnaire and lie about their age and education level which could hinder the results. More variables such as gender and level of psychology was needed.	A South African perspective on the prevalence of psychological myths in KZN students.		
					Probability Simple random sampling 20 participants					

Title: A cross-sectional, quantitative study on the prevalence of psychological myths in students in KZN, South Africa.

Annexure B: Consent Form

Explanatory information sheet and consent form for participants
To whom it may concern, My name is Claire Hill and I am a student at Varsity College Durban North. I am currently conducting research under the supervision of Suhaila Ameer which is an investigation of the state of knowledge about psychology. I hope that this research will enhance our understanding of mental health literacy. I would like to invite you to participate in my study. In order to explain to you what your participation in my study will involve, I have formulated questions that I will try to fully answer so that you can make an informed decision about whether or not to participate. If you have any additional questions that you feel are not addressed or explained in this information sheet, please do not hesitate to ask me for more information. Once you have read and understood all the information contained in this sheet and are willing to participate, please complete and sign the consent form below.
What will I be doing if I participate in your study?
I would like to invite you to participate in this research because it would add to the field on mental health literacy and studies in higher education. If you decide to participate in this research, I would like to (explain exactly what participation will involve. You will answer the questionnaire following the instructions included on the top of the questionnaire and accept that you fit the criteria for the study. You will not provide any information about yourself as you will remain completely anonymous. You can decide whether or not to participate in this research. If you decide to participate, you can choose to withdraw at any time or to decide not to answer particular interview questions.
Are there any risks/ or discomforts involved in participating in this study?
Whether or not you decide to participate in this research, there will be no negative impact on you. There are no direct risks or benefits to you if you participate in this study. If you find at any stage that you are not comfortable with the line of questioning, you may withdraw or refrain from participating.
Do I have to participate in the study?
• Your inclusion in this study is completely voluntary; • If you do not wish to participate in this study, you have every right not to do so; • Even if you agree to participate in this study, you may withdraw at any time without having to provide an explanation for your decision.

Will my identity be protected?
I promise to protect your identity. I will not ask for your name in any research summaries to come out of this research. The answers to the questionnaire will be completely anonymous so no one will know who are.
What will happen to the information that participants provide?
I will write summaries to be included in my research report, which is a requirement to complete my Honours degree in Psychology. You may ask me to send you a summary of the research if you are interested in the final outcome of the study.
What happens if I have more questions about the study?
Please feel free to contact me or my supervisor should you have any questions or concerns about this research, or if there is anything you need to know before you decide whether or not to participate. You should not agree to participate unless you are completely comfortable with the procedures followed. My contact details are as follows: Claire Hill The contact details of my supervisor are as follows: Suhaila Ameer
Consent form for participants
I agree to participate in the research conducted by Claire Hill about the investigation of the state of knowledge about psychology. This research has been explained to me and I understand what participation in this research will involve. I understand these statements below by ticking the blocks next to them:
• My confidentiality will be ensured. My name and personal details will not be required which ensures anonymity. ☐
• My participation in this research is voluntary and I have the right to withdraw from the research at any time. There will be no repercussions should I choose to withdraw from the research. ☐
• I may choose not to answer any of the questions that are asked during the questionnaire. ☐

Annexure C: Questionnaire

An investigation of the state of knowledge about psychology questionnaire

Please tick the information about yourself which gives the researcher demographical information for the study. It is compulsory to be a South African KZN university student between the ages of 18-25, who has participated in a psychology course:

1. I am a South African, KZN, university student who has participated in at minimum an introductory psychology course ☐
2. I am 18 years old ☐
3. I am 19 years old ☐
4. I am 20 years old ☐
5. I am 21 years old ☐
6. I am 22 years old ☐
7. I am 23 years old ☐
8. I am 24 years old ☐
9. I am 25 years old ☐
10. I am male ☐
11. I am female ☐

Below are a number of statements around psychology. Would you please indicate how much you agree or disagree with each by entering a number alongside it according to the following number pattern:

1=strongly disagree; 2=slightly disagree; 3=neutral; 4= slightly agree; 5= strongly agree

1. Most people only use 10% of their brain power _____
2. Adults can grow new brain cells _____
3. Colour-blind people can see at least some colours _____
4. Some people are exclusively right-brained, and others are left-brained _____
5. It is not common for individuals to repress memories of traumatic events _____
6. We can remember events back from the time of our birth _____
7. Some individuals have photographic memories _____
8. People with amnesia can recall some details of their early life _____

- 9. IQ scores are not stable in childhood _____
- 10. There is a relationship between brain size and IQ in humans _____
- 11. Negative reinforcement is a type of punishment _____
- 12. Students only recall 10% of what they read _____
- 13. Only deeply depressed people commit suicide _____
- 14. People with schizophrenia do not have multiple personalities _____
- 15. People who experience severe trauma (war) do not develop post-traumatic stress disorder _____
- 16. All clinically depressed people suffer from extreme sadness _____

Annexure D: Debrief

Thank you so much for your participation in this study, the data collected from these questionnaires will help me determine if an introductory psychology course has impact on the belief of psychological myths. If you have any questions or problems, please contact me Claire Hill at [REDACTED].

In the beginning of the study you were informed what the study was about which was something nonsensical. What the study was really about was on the prevalence of psychological myths in South African, KZN students. Deception was used in this study to avoid influencing your answers. The study was looking at the extent of your beliefs in psychological myths as the questionnaire presented some psychological myths as facts. This was to determine whether an introductory psychology course had any bearing on whether or not you would correctly identify the psychological myths.

The answers to the questionnaire are below:

1. Most people only use 10% of their brain power
2. Adults can grow new brain cells*
3. Colour-blind people can see at least some colours*
4. Some people are exclusively right-brained, and others are left-brained
5. It is not common for individuals to repress memories of traumatic events*
6. We can remember events back from the time of our birth
7. Some individuals have photographic memories
8. People with amnesia can recall some details of their early life*
9. IQ scores are unstable in childhood*
10. There is a relationship between brain size and IQ in humans*
11. Negative reinforcement is a type of punishment
12. Students only recall 10% of what they read
13. Only deeply depressed people commit suicide
14. People with schizophrenia do not have multiple personalities*
15. People who experience severe trauma (war) do not develop posttraumatic stress disorder*
16. All clinically depressed people suffer from extreme sadness

* Indicates true statements which are reverse scored.

Annexure E: Ethical Clearance Letter



20 July 2020

Student name: Claire Hill

Student number: 16006983

Campus: Varsity College Durban North

Re: Approval of HPS1 Proposal and Ethics Clearance HONOURS/PGDIP ETHICAL CLEARANCE LETTER

Your research proposal and the ethical implications of your proposed research topic were reviewed by your supervisor and the campus research panel, a subcommittee of The Independent Institute of Education's Research and Postgraduate Studies Committee.

Your research proposal posed no significant ethical concerns and your supporting documents and instruments are in order to proceed. We hereby provide you with permission to proceed with your research.

In the event of you deciding to change your research methodology in any way, kindly consult your supervisor to ensure all ethical considerations are adhered to and pose no risk to any participant or party involved. A revised ethical clearance letter will be issued.

We wish you all the best with your research!

GENERAL CONDITIONS TO BE FULFILLED IN RELATION TO RESEARCH

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

Please note: The panel has not considered the merits, accuracy or ethical soundness of the research. The only merits examined are the use of The IIE as a sample.

Permission is granted subject to the following conditions:

1. The researcher(s) will need to obtain informed consent in writing from all of the participants in his/ her sample if the study is not anonymous.
2. The researcher(s) may only use the data collected for research purposes and in no other way.
3. Photographs of human subjects may only be taken if relevant to the research, informed consent was obtained, and even with informed consent, the photographs may not be published on any online platforms.
4. The researcher is responsible for supplying and utilising his/her own research resources, such as stationery, photocopies, transport, faxes and telephones and should not depend on the goodwill of the institutions and/or the offices visited for supplying such resources.

5. No names or identifying information of participants may be used within the research and the research must be voluntary.
6. Please make it clear that the information will not be used punitively in any way and participants may in no way be counselled/advised based on this.

Supervisor: Tracey Haselau

Campus Postgraduate Coordinator (CPC): Dr Razia Khan

Honours co-ordinator: Tracey Haselau

Annexure E: Ethics Checklist



HONOURS RESE, RESM and RMET ETHICS CHECKLIST

Dear student

Please complete this checklist and include this in your proposals as an appendix:

Student name: Claire Hill

Title of the research: A cross-sectional, quantitative study on the prevalence of psychological myths in students in KZN, South Africa.

	Yes	No	Comment:supervisor/ navigator/lecturer
Are you using human subjects in your research?	X		
I intend to use human subjects - I understand that I will not conduct research with human subjects under the age of 18 and other vulnerable groups. - I understand I can only proceed once I receive an ethical clearance letter.			
Interviews/ Focus groups An example of the <i>written consent form</i> I intend to use is attached.			
I will record the interview/focus groups and the sample of the letter where I ask for permission to do so is attached.			
I plan to use an interview schedule: The example of my research instrument is attached.			
I plan to use a questionnaire: The example of my research instrument is attached.	X		
I plan to use a gate-keepers letter: The example of my letter is attached.			
I plan to do research on an IIE site/with IIE students/staff/artefacts and I filled in the			

application for permission to do so. The application is attached. I understand I can only proceed once I receive IIE Approval for this.			
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Signed: student.....

Annexure F: Originality Report

Blackboard

SafeAssign Originality Report

RESE8419_VCDN1 • Step 2: Submit Assignment 7 - Research Report • Submitted on Sun, 25 Oct 2020, 11:28

[View Originality Report - Old Design](#)

Claire Hill

 View Report Summary

COVER PAGE

TITLE: ① A CROSS-SECTIONAL, QUANTITATIVE STUDY ON THE PREVALENCE OF PSYCHOLOGICAL MYTHS IN STUDENTS IN KZN, SOUTH AFRICA.

STUDENT NAME AND NUMBER: ② CLAIRE HILL 16006983

SUPERVISOR'S NAME: SUHAILA AMEER

MODULE NAME AND CODE: RESE8419

QUALIFICATION DETAILS: ③ BA HONOURS IN PSYCHOLOGY

Declaration: ④ I hereby declare that the Research Report submitted for the BA Psychology Honours degree to The Independent Institute of Education is my own work and has not previously been submitted to another University or Higher Education Institution for degree purposes.

Word count: 10144

ABSTRACT

① The literature on psychological myths has shown that there is a prevalence of myths in the general population and that a psychology course could have an impact on these myths. Most of the literature available on this topic is gleaned from an international context. A replication of the Gardner and Brown (2013) study was undertaken in a South African context. Using similar questions from the instrument of Gardner and Brown (2013), KZN psychology students were asked to answer the questionnaire off the Facebook platform. There were 20 participants. Descriptive content analysis was undertaken; and the findings revealed

Attachment 1

RESE FINAL TOUCHES REAL.docx

100 %

Sources

INCLUDED SOURCES

Institutional database (13) 100 % ✓

Internet (2) 0 % ✓

Top sources

Word Count: 13,342

Submitted on: 25/10/20

Submission UUID: c94aac4d-6310-947e-ba3d-96715d670774

Attachment UUID: ec42bad-addf-8b99-1d8f-34d9425a3b13