INVESTIGATING THE PREVALENCE OF AWARENESS AND HELP-SEEKING BEHAVIOUR FOR DEPRESSION IN THE FIRST-YEAR PSYCHOLOGY STUDENT POPULATION AT THE UNIVERSITY OF PRETORIA

by

BRANDEN BLAKE VERSFELD

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Statement by Language Editor

P.O. Box 955
Oudtshoorn
6620
Tel (h): (044) 2725099
Tel (w): (044) 2034111
Cell: 0784693727
E-mail:
dsteyl@polka.co.za

25 January 2019

TO WHOM IT MAY CONCERN

STATEMENT REGARDING LANGUAGE EDITING OF MINI-DISSERTATION

Hereby I, Jacob Daniël Theunis De Bruyn STEYL (I.D. 5702225041082), a language practitioner accredited to the South African Translators' Institute (SATI), confirm that I have edited the language of the following mini-dissertation:

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Author: Mr Branden Blake Versfeld

Yours faithfully

J.D.T.D. STEYL
PATran (SATI)
SATI REGISTRATION NUMBER: 1000219

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Abstract

Depression has been found to be highly prevalent among university students and is shown to be increasing globally; yet, despite this increase in student depression, countless students go untreated. The aim of this study was to identify first- year psychology students' awareness of and help-seeking behaviour due to depression at the University of Pretoria. This study followed a quantitative descriptive research design, which was non-experimental in nature. Data were collected using an online questionnaire, in which 134 first-year students participated. Results indicate that 92.5% of participants believed they were aware of the symptoms of depression. However, 25% of participants were unable to identify whether they were suffering from depression. This was a matter of concern, as 53.7% of participants exhibited some degree of depressive symptoms. Of the participants in the study, 41% were not aware of student support services available on campus, and 70.9% were unaware of external organisations that offer support for depression. Interestingly, despite the lack of awareness of external organisations, the majority of participants believed that these organisations would be more effective in treating depression compared to student support services. A lack of time, financial constraints, and stigmatisation were the most prevalent barriers that prevented participants from seeking help. The results suggest that the university should attempt to reduce stigmatisation in seeking help for depression and provide more exposure for support facilities available to students on campus, as well as further education around depression itself. Further research is needed to identify if these results extend to other students in South Africa.

Key Terms: depression, awareness, help-seeking behaviour, Health Belief Model, Beck Depression Inventory-II (BDI–II), South Africa, university students.

Chapter 1: Introduction and Background

1.1 Introduction

Depression is one of the most common psychiatric disorders worldwide, and the World Health Organisation (2018) considers it the leading cause of disability across the globe, as well as a major contributor to the overall global burden of disease. It causes significant psychological and physical impairment on an individual level and has proved to be a significant economic burden on the greater society (Tjia, Givens, & Shea, 2010).

Depression is highly prevalent among university students in many societies. This correlates with research that shows that the most common age of onset for depression is in one's early twenties (Dwyer, Murphy, O'Sullivan, & Di Blasia, 2014; Hunt & Eisenberg, 2010). Depression in the student population has been well documented over the years with authors focusing on various aspects of depression. These have included risk factors for student depression (Dyrbye, Thomas, & Shanafelt, 2006), the influence of depression on academic performance (Andrews & Wilding, 2004), and a correlation between depression and substance abuse (Cranford, Eisenberg, & Serras, 2009; Wang et al., 2007), to name but a few. Yet, despite the amount of research conducted on depression within the student population, a notable lack of research is evident with regard to students' own awareness of depression and help-seeking behaviour (Tjia et al., 2010). This is especially evident in the South African context (Naidoo, Naidoo, & Naidoo, 2015).

Against this background, the aim of this study was to identify the prevalence of awareness and help-seeking behaviour for depression in the first-year psychology student population at the University of Pretoria. These topics (awareness and help-seeking behaviour of depression) are important aspects to cover, because students cannot benefit from treatment methods available for depression if they are not aware that they are suffering from depression in the first place. An alternative explanation can be that students are aware that they are suffering from depression but are not seeking help for their depression. Reasons for not seeking treatment could vary from a lack of knowledge of the services that are made available at the University of Pretoria to assist with depression, or students could be reluctant to seek treatment for their depression due to a fear of discrimination and stigmatisation (Buchanan, 2012; McAuliffe, Boddy, McLennan, & Stewart, 2012).

1.2 Scope and Motivation for the Research

Many students attend university at the age during their lives when the onset of depression is most likely to occur (Hunt & Eisenberg, 2010). This makes university a unique setting to screen for depression, as it can allow for early intervention and treatment of individuals experiencing the onset of depression. Universities also have an added advantage in that they are a useful setting to educate students about depression. Educating students about depression can assist students through the difficult transformation into adulthood and can equip students with an understanding and skill set that can assist in dealing with depressive episodes if they were to occur in the future (Hunt & Eisenberg, 2010).

Research has shown that depression is associated with self-harming behaviour and suicide that peak in the age groups most commonly found at university (Dwyer et al., 2014). This is also prevalent at the University of Pretoria with four reported incidences of suicides or suicidal attempts at the university that made the headlines of national newspapers between 2012 and 2017 (Bateman, 2012; Citizen Reporter, 2014; Keppler, 2017; Ngwenya, 2014).

According to Andrews and Wilding (2004), the number of seriously disturbed students consulting student health services is an issue of growing concern. In turn, this has led to concerns about the negative effect of poor mental health on students' academic performance (Dwyer et al., 2014). Despite the availability of treatment, people suffering from depression frequently go untreated. Studies have shown a significant lack of awareness and help-seeking behaviour for major depression, regardless of the severity of the illness or the presence of suicidal ideation (Tjia et al., 2010).

Although depression is common among young adults, it is not a normal developmental process, as it affects many aspects of a student's life negatively and has negative effects on their tertiary education (Putwain, 2007). Educating students, specifically younger age groups, may help overcome barriers to seeking help for their depression in the future (Bowman & Payne, 2011).

Many students in this population do not receive mental health treatment. Therefore, it is important to understand which factors prevent or encourage help-seeking behaviour, as well as the consequences of persistent untreated mental health problems (Zivin, Eisenberg, Gollust, & Golberstein, 2009).

Furthermore, efforts aimed at educating students about their risk of mental illness could improve awareness and help-seeking behaviour (Tjia et al., 2010). It was found that the presence of free and confidential mental health services did not necessarily remove barriers to treatment (Tjia et al., 2010). This suggests that extra efforts to address mental health awareness may be beneficial.

1.3 Abbreviations

- "BDI–II" refers to the Beck Depression Inventory – II, which was used as the screening method for depressive symptoms in this study.
- "HBM" refers to the Health Belief Model, which is the theoretical paradigm that underpinned this study.
- "Mental disorders" are characterised by sustained, abnormal alterations in mood, thinking, or behaviour that is associated with distress and impaired functioning.
- "UP" will be used to refer to the University of Pretoria.

1.4 Definition of Concepts

In the context of this research, the concepts of mood disorders and depression are defined as follows:

1.4.1 Mood disorders. Mood disorders represent a category of mental disorders in which the underlying problem primarily affects a person's persistent emotional state (his or her mood). A mood disorder is often characterised by a loss of a sense of control of moods and affects the subjective experience of immense distress. Typically, these disorders result in impaired interpersonal, social, and occupational functioning (Sadock, Sadock, &, Ruiz, 2014). Disorders such as major depression, bipolar disorder, and dysthymia are all forms of mood disorders. Persons who are affected with only major depressive episodes are said to have a major depressive disorder or unipolar depression, whereas persons who are affected by both manic and depressive episodes are considered to have bipolar disorder (Sadock et al., 2014).

1.4.2 Major depressive disorder. The DSM-5 states that a major depressive disorder occurs without the history of a manic, mixed, or hypomanic episode. A major depressive episode needs to last for a minimum of two weeks and present a change from previous

functioning (American Psychiatric Association [APA], 2013). Additionally, a person typically diagnosed with a major depressive disorder experiences at least five symptoms of which at least one is depressed mood or loss in pleasure of activities. The symptoms are taken from a list of depressive symptoms indicated by the APA that includes changes in appetite and weight, altered sleep and activity patterns, psychomotor agitation, fatigue or loss of energy, feelings of worthlessness and guilt, problems in concentration and decision making, and recurrent thoughts of suicide or death (APA, 2013).

1.5 The Aims and Objectives of the Research

This study aimed to identify the prevalence in awareness and help-seeking behaviour due to depression in the first-year psychology student population at the University of Pretoria. This study was non-experimental in nature and intended to recognise the extent of depression in the sample population, as well as the extent of awareness and help-seeking behaviour due to depression in this sample.

This study aimed to build on the existing body of knowledge of the awareness and help-seeking behaviour due to depression by completing the following objectives:

- Expand on the knowledge of the awareness and help-seeking behaviour of students in the South African context, specifically focusing on the University of Pretoria.
- Identify the number of first-year students suffering from depressive symptoms in the sample and whether these students are aware that they are exhibiting symptoms of depression.
- Identify the number of participants who are seeking help for their depressive symptoms.
- Identify possible reasons why students do not seek help for their depressive symptoms.
- Identify if participants are aware of the services that are made available to them through the university to assist with depression and other psychological issues.

1.6 Structure of the Dissertation

Chapter 1 provides the scope and motivation for investigating the awareness and help-seeking behaviour due to depression in the psychology student population at the University of

Pretoria. The aim of the study was to investigate the extent of awareness of depression and depressive symptoms, as well as the degree to which the sample sought help for depression when they started exhibiting symptoms. The researcher's objective was to screen students using the Beck Depression Inventory – II (BDI–II) to assess their current level of depression and then to determine if they were seeking any form of help to assist them with their depressive symptoms.

Chapter 2 takes comprehensive look at the literature regarding depression in the student population. The chapter covers literature pertaining to the nature of depression and diagnosis, screening tools used to identify depressive symptoms, international literature on depression in student populations, as well as South African literature on depression in student populations.

Chapter 3 presents a discussion of the research methodology that underpinned the study. The research design and research paradigm are discussed, followed by a description of the theoretical paradigm. The next aspect discussed in this chapter is the sampling strategy, including a description of the sample obtained and demographics of participants who participated in the study. The measurement instrument, data collection, and analysis procedures are then discussed. Lastly, the chapter concludes with an overview of the ethical considerations involved in the study.

Chapter 4 presents the results of the data analysis. The chapter is divided into four sections: analysis of questions pertaining to the BDI–II, analysis of questions pertaining to student's transition into university life, analysis of questions pertaining to the awareness levels of participants with regard to depression, and analysis of questions pertaining to participants' help-seeking behaviour. Each section includes a brief description of the type of analysis and explanation why the analysis is used.

Chapter 5 is the final chapter and includes the interpretation and discussion of results found in Chapter 4. These results are interpreted in the context of the research problem and relate back to the literature reviewed in Chapter 2. Lastly, the chapter discusses limitations of the study and recommendations for future research.

1.7 Conclusion

Chapter 1 provided the context and framework for the implementation of the present study, contextualised the research within the current literature, and addressed the relevance of

the research problem to South Africa. The chapter also defined and explained important definitions. Furthermore, it explored the aims and objectives of the study, and outlined the structure of the research chapters. Chapter 2 provides an in-depth look at the literature pertaining to this topic.

Chapter 2: Literature Review

2.1 Introduction

University students can be considered a high-risk population for the development of depression, with literature highlighting that university students are in a volatile period in their lives, which is often accompanied with distressing life transitions (Bayram & Bilgel, 2008). Considerable research has been conducted on depression among university students, focusing on various aspects of the disorder. Despite this, research statistics show that depression is increasing significantly among university students (Hunt & Eisenberg, 2010). The researcher believes that this is because there is a gap in the research regarding the awareness and help-seeking behaviour of university students regarding depression (Tjia et al., 2010). Depression has significant implications for those struggling with the disorder because it often can worsen over time and even lead to suicide if not identified and treated correctly (Furr, Westefeld, McConnell, & Jenkins, 2001). This downward spiral of depression speaks to the importance of identifying and treating depression as early as possible. Awareness of the illness, as well as information regarding where one can find help, can be considered the first step in the process of treating depression (Rathbone, 2014).

This chapter considers relevant literature on depression to highlight what has been explored already in relation to the focus of this study. The literature review is divided into three comprehensive sections. The first section addresses the nature of depression and diagnostic considerations. This section provides the reader with an overview of depression as a disorder. The second section addresses depression in the student population from a global perspective and includes literature on the awareness and help-seeking behaviour of students. The final section of this chapter explores literature on depression at South African universities.

2.2 Nature of Depression and Diagnostic Considerations

Drawing from Sadock et al. (2014), mood disorders represent a category of mental disorders in which the underlying problem primarily affects a person's persistent emotional state (his or her mood). A mood disorder is often characterised by the loss of a sense of control of mood and affect and a subjective experience of immense distress. Typically, these disorders result in impaired interpersonal, social, and occupational functioning (Sadock et al., 2014).

Mood disorders, which include major depressive disorders, are extremely common with approximately one in five people being affected by a mood disorder at some point during his or her life (Williams et al., 2000). The World Health Organisation (2018) believes that major depression is now the most prominent psychiatric disorder in the world.

The South African Stress and Health study (a nationally representative household survey conducted between 2002 and 2004, which included 4 351 adult South Africans of all racial groups) showed that the prevalence of major depression in participants was 9.7 percent for lifetime and 4.9 percent for the 12 months prior to the interview (Tomlinson, Grimsrud, Stein, Williams, & Myer, 2009).The prevalence of depression for South Africans in this survey was higher among those with a low level of education and was significantly higher among females than among males. This is consistent with findings by Sadock et al. (2014), who reported the prevalence of a major depressive disorder to be twice as common in women as in men. Depression was also found to be more common in rural areas than in urban areas, keeping in mind that residing in rural areas in South Africa is often equated with lack of access to formal education.

2.2.1 Depressive disorders. According the DSM-5, depressive disorders include disruptive mood dysregulation disorder, major depressive disorder (including major depressive episode), persistent depressive disorder (dysthymia), premenstrual dysphoric disorder, substance/medication-induced depressive disorder, depressive disorder due to another medical condition, other specified depressive disorder, and unspecified depressive disorder (Joyce, 2008).

Unlike in DSM-IV-TR, the DSM-5 separates depressive disorders from the previous chapter focused on bipolar and related disorders. The common feature of all depressive disorders in the DSM-5 is the presence of sad, empty, or irritable mood, accompanied by somatic and cognitive changes that significantly affect the individual's capacity to function. Matters concerning aetiology, duration, and timing differ among them (Joyce, 2008).

2.2.2 Depressive episodes. The major symptoms of depression are a depressed mood and a loss of interest or pleasure. The most common symptom of depression is generalised psychomotor retardation. Typically, a depressed client slouches, shows no spontaneous movement, and presents a downcast, averted gaze. Depressed clients may also display psycho-agitation, which commonly involves hand wriggling and hair pulling (Sadock et al., 2014). Depressed people classically have negative views of themselves and the world and

often ruminate about loss, guilt, suicide, and death. The contemplation of suicide is common among depressed clients, with two thirds engaging in such thoughts, and 10 to 15 percent of depressed clients committing suicide (Sadock et al., 2014).

2.2.3 Diagnostic criteria for major depressive disorder. The DSM-5 states that a major depressive episode needs to last for a minimum of two weeks and present a change from previous functioning. Additionally, a person typically diagnosed with a major depressive disorder experiences at least five symptoms of which at least one is depressed mood or loss of pleasure in activities (APA, 2013). The symptoms are taken from a list that includes changes in appetite and weight, altered sleep and activity patterns, lack of energy, feelings of guilt, problems in thinking and decision making, and recurrent thoughts of suicide or death (Sadock et al., 2014).

2.2.4 Diagnosing depression. In determining whether a client is depressed, clinicians should ask questions centred on determining whether the client is experiencing apathy, anhedonia, amotivation and loss of interest in hobbies, socialisation, work, food, and sex (Sadock et al., 2014). Clinicians should be mindful that depressive clients often render positive life events as ineffective at altering the depressed state, and potentially enjoyable or rewarding activities are curtailed or engaged in only through extraordinary effort (Drevets, 2001). Given that some degree of depressive feelings is ‘normal’, to some extent, in most individual’s lives, Kendrick and Peveler (2010) make a relevant argument that a comprehensive diagnosis of a depressive disorder should not rely simply on a symptom count but should consider the degree of the functional impairment or disability. It should be noted that although the researcher made use of the BDI–II scale to identify depressive symptoms in the participants, a detailed diagnosis was not conducted as suggested above because the topic of this study does not focus on the prevalence of depression, but rather the prevalence of awareness and help-seeking behaviour due to depression.

2.2.5 Screening instruments for depression. A depressed client’s clinical state can be evaluated using objective screening instruments for depression. A distinction should be made between a screening instrument and an assessment. It can be considered that a screen precedes an assessment and usually determines whether an assessment is required. Screening is the process of evaluating the presence and severity of a problem, whereas an assessment aims to define the nature of the problem, define a diagnosis, and provide treatment recommendations to the client (Center for Substance Abuse Treatment, 2009) The purpose of

this study is not to diagnose depression but rather to identify the prevalence of depression, in order to shed more light on the awareness and help-seeking behaviour for depression in the population of first-year psychology students. For this reason, a screening instrument was utilised for the study. Various screening instruments of this nature were available, but for the purposes of this research, the BDI–II was used to screen for depression. The BDI–II was selected because it is among the most commonly employed screening instruments for depression internationally and has indicated strong reliability and validity with university students of different ethnicities, races, and genders across the globe (Dyrbye et al., 2006). The BDI–II instrument will be discussed further in Chapter 3.

The prevalence of depression was determined by using the results from BDI–II. The BDI–II captured participants' subjective opinions to whether they were presenting with various symptoms associated with depression. The results of the BDI–II screening instrument could not serve as a clinical diagnosis for depression, as a professional qualified to diagnose depression would have been required to conduct an assessment with each participant that screened positive for depression, in order to confirm that their BDI–II results were in fact an indication of depression (Sheehan & McGee, 2013). It was not logistically possible to allow every participant that screened positive for depression the opportunity to consult with a qualified professional. Several ethical dilemmas arise if collaborative care in not available to assist students once they have been diagnosed, including potential inappropriate labelling, potential false negatives, and the potential for inappropriate treatment. Evidence suggests that reporting positive screens for depression should be considered only if collaborative care is available to guard against these dilemmas (Sheehan & McGee, 2013). For this reason, the prevalence of depression was determined from the results of the screening instrument, without confirming an official diagnosis. It cannot be said that the results from the screening instrument would constitute a diagnosis of depression in every instance; however, the BDI–II is one of the most reliable instruments used to screen for depression in a student population (Beck, Steer, & Brown, 1996b). The BDI–II provides an acceptable picture of the number of participants struggling with depression without having to risk the ethical dilemmas of diagnosing patients without adequate collaborative care.

2.3 Working with Depression in Student Populations at Universities

For many, university represents the only time in their lives when a single unified setting encompasses all their main activities – both career related and social, including health and

other support services (Hunt & Eisenberg, 2010). Hunt and Eisenberg (2010, p. 3) explain, "[C]ampuses, by their scholarly nature, are also well positioned to develop, evaluate, and disseminate best practices. In short, universities offer a unique opportunity to address one of the most significant public health problems among late adolescents and young adults". For this reason, exploring depression along with other mental disorders at universities may allow us to tackle the growing concern of mental illness in the student population and offer an opportunity to assist many students during an important and volatile period of their lives (Hunt & Eisenberg, 2010; McAuliffe et al., 2012).

2.3.1 Prevalence of mental disorders in the student population, focusing on depression. Mental disorders account for roughly half of the disease burden for young adults –10 to 24 years old – in the United States (World Health Organisation, 2018). Studies indicate that the onset of most lifetime mental disorders occurs during or shortly before the typical university age (Dwyer et al., 2014; Eisenberg, Gollust, Golberstein & Hefner, 2007b; Hunt & Eisenberg, 2010). The matter of mental disorders in the tertiary student population is becoming a growing concern, with research indicating that the prevalence of mental disorders in the university student population is increasing across the globe (Hunt & Eisenberg, 2010; Zivin et al., 2009). Untreated mental illness may have significant implications for the student's academic success (Zivin et al., 2009), productivity (Wang et al., 2007), tendencies for substance abuse (Hunt & Eisenberg, 2010), social relationships, and overall quality of life (Hunt & Eisenberg, 2010; McAuliffe et al., 2012; Zivin et al., 2009).

University students are a unique group of individuals, as the majority of the student population are enduring a critical transitory period in which they are changing from adolescence to adulthood, which can be one of the most stressful and traumatic times in a person's life (Bayram & Bilgel, 2008). Young adults need to cope with psychological and psychosocial changes that are related to the development of their autonomous selves. Trying to fit in, do well academically, cope with financial constraints, and planning for the future are stressors that can often cause anxiety and depression for students (Sarokhani et al., 2013).

Evidence indicates that high levels of psychological morbidity, especially depression and anxiety, are found among university students from all corners of the globe (Bayram & Bilgel, 2008; Dyrbye et al., 2006; Eisenberg et al., 2007b). In 2005, Zivin et al. (2009) conducted a longitudinal web-based survey with 2843 students attending a large public university in the United States, and a two-year follow-up survey was conducted in 2007. The researchers

screened students for mental disorders (including depression) and suicidal ideation. Their results showed that over half the students in the study had at least one mental disorder and that between the 2005 and 2007 survey, depression had increased by 10% in the student population. In her literature review of prevention of depression in college students, Buchanan (2012) highlights similar results from the American College Health Association's (ACHA) cumulative data. The ACHA believes that depressive disorders may be the most prevalent disorders experienced by college students in the USA, with surveys showing that from 1998 to 2008, the prevalence of depression rates had risen by 4.6%, from 10.3% in 1998 to 14.9% in 2008.

2.3.2 Risk factors for depression in the student population. Adjustment to university is a multidimensional process that requires students to develop coping mechanisms to deal effectively with a range of new demands, be it social, emotional, or academic areas of development (Sennett, Finchilescu, Gibson & Strauss, 2003). Literature has highlighted some of the following risk factors that can trigger depressive symptoms in the student population:

2.3.2.1 Financial difficulties. Andrews and Wilding (2004) conducted a longitudinal study with students entering university in the UK. The aim of their study was to identify whether anxiety and depression increased after university entry. The study identified that 9% of students who were previously symptom free were presenting symptoms of depression mid-way through the course of their academic year. In addition, they found that financial difficulties had a significant independent contribution to depression. Entering university can cause a significant financial burden for students who are often required to pay off exorbitant academic fees (Andrews & Wilding, 2004). More than 20% of students who participated in the study reported a major financial crisis. Of all the aspects assessed by Andrews and Wilding (2004), financial difficulties was the only one indicating an independent relationship with depression.

Similar results were found between the relationship between financial difficulties and depression in other studies (Dyrbye et al., 2006; Eisenberg et al., 2007b; Putwain, 2007).

2.3.2.2 Social stressors. Another factor that has been shown to contribute to depression in the student population is social stressors. Many students are required to move away from the comfort of their established social support system when they begin their studies, which can be quite a traumatic life adjustment, especially coupled with other life changes (Sennett et al., 2003).

Dwyer et al. (2014) conducted a study in where they examined the interaction of neuroticism and perceived social support with depression. Perceived social support is referred to as the individual's subjective sense of adequacy to which the individual feels he/she is receiving social support, regardless of how adequate the objective social support actually is (Dwyer et al., 2014). A cross-sectional survey was employed, with data being collected from 362 students of emerging adulthood (18 to 25 years old) at the University College Cork (Dwyer et al., 2014). The results indicated a positive relationship between perceived social support and depression, where students with lower perceived social support had higher levels of depression. Dwyer et al. (2014) believe that higher perceived social support is an important protection against depression in students, especially those with high levels of neuroticism. This study highlights the importance that social support, or at least perceived social support, can have for one's mental health.

Literature has shown similar results with regard to social dynamics and depression. The more disconnected one feels to one's social group, the more vulnerable one is to depression. Students are more vulnerable to depression when they experience problems in their current social relationships (Dyrbye et al., 2006), have difficulty establishing new support systems (Sennett et al., 2003), or identify major differences between themselves and the social system of which they are a part at the university (Buchanan, 2012; Eisenberg et al., 2007b; Sennett et al, 2003). A prime example of this is suggested by Kisch, Leino, & Silverman (2005), who state that individuals who are struggling with their sexual identity are more susceptible to depression and suicidal tendencies because these individuals often feel as if they do not fit in or are concerned about being discriminated against by their peers (Kisch et al., 2005).

Other studies have shown that single students are more likely to be depressed compared to married students or students in a romantic relationship. The hypothesis for these findings is that spouses or romantic partners of students provide emotional support to their partners that can assist in guarding against depression (Dyrbye et al., 2006).

2.3.2.3 Formation of bad habits. A great amount of freedom comes from attending university. For many students, university is the first time that they will live away from their parents or guardian. White, McMorris, Catalano, Fleming, & Haggerty, (2006) state that moving away from one's home is an important passage in one's life. There is a noted change in the social environment and the role responsibility of individuals as they move away from their guardians. With reduced supervision and fewer restrictions on their daily lives, students

now have the choice of what they want to eat, when they want to sleep, and what they want to do with their time. This, coupled with the fact that for many people university is associated with experimentation and "finding oneself" (White et al., 2006), can lead to the forming of bad habits that are associated with depression. These bad habits may be precipitated or exacerbated by a variety of stressors in university life (Eisenberg et al., 2007b).

These bad habits can include the following:

- Irregular sleeping patterns or sleep deprivation (Dyrbye et al., 2006; Eisenberg et al., 2007b)
- Irregular eating patterns, binge eating or poor diets (Zivin et al., 2009)
- A lack of exercise (Byrne & Byrne, 1993; Radovic, Melvin, & Gordon, 2018)
- Increased frequency in alcohol use and heavy episodic drinking (Cranford et al., 2009; White et al., 2006)
- Substance abuse (Cranford et al., 2009; White et al., 2006)

It should be noted that, for many students, the freedom that accompanies attending university is not the only factor that can lead to forming bad habits. Negative influence of peers, financial constraints, and depression itself are some other examples that can also result in forming poor habits. It is important to realise that forming bad habits can have negative effects on the student's mental health (Cranford et al., 2009).

2.3.2.4 Personal traits. It should be noted that not all risk factors that can cause depression in the student population are a result of external risks. Certain personal traits increase vulnerability to developing depression. Some of these attributes have already been referred to, such as the age group vulnerability of students who are emerging into adulthood (Bayram & Bilgel, 2008) and the individual's perceived social support (Dwyer et al., 2014). Other personal traits that can increase the vulnerability of depression in the student population are the following:

- Cognitive vulnerability: Beck's cognitive model of depression, like other cognitive theories of depression, defines cognitive vulnerability as an internal and stable feature of a person that influences the development of depression after negative events (Abela et al., 2011). Evidence from studies testing Beck's cognitive theory

suggests that under usual conditions, individuals vulnerable to depression are indistinguishable from the general population. Only when confronted with certain stressors, the differences between vulnerable and non-vulnerable individuals emerge (Abela et al., 2011). For individuals with cognitive vulnerability factors, negative events trigger a pattern of negatively biased, self-referent information processing that initiates a downward spiral into depression (Abela et al., 2011). In a longitudinal study conducted by Abela et al. (2011), they examined the applicability of Beck's 1967 and 1983 cognitive theory of depression to university students in China. The initial assessment involved participants completing measures that assessed depressive symptoms and dysfunctional attitudes of participants. Following these initial assessments, once a month for six months, participants had to complete measures assessing depressive symptoms and the occurrence of negative events. Results of the study provided supporting evidence for Beck's 1967 and 1983 cognitive theory of depression. It was found that, following the occurrence of negative events, the participants who presented with higher levels of depressive symptoms also presented with dysfunctional attitudes and behaviour (Abela et al., 2011).

- Gender: Research has indicated that gender should be noted as a risk factor for depression, as well as suicide. In comparison with their male counterparts, female undergraduate students are more likely to screen positive for anxiety and depressive disorders (Eisenberg et al., 2007b). Several international studies, including studies in Britain, Nigeria, Turkey, USA, and Hong Kong (Bayram & Bilgel, 2008; Dyrbye et al., 2006; Pidgeon, Rowe, Stapelton, Magyar, & Lo, 2014), indicate that female students are more prone to anxiety and depression than male students are, which suggests that gender is a noticeable risk factor for depression in university students (Pidgeon et al., 2014).

- Students from lower socioeconomic backgrounds are at a higher risk for developing depressive symptoms. Theory holds that it is the result of more difficult life circumstances, financial difficulties, and lack of access to support (Hunt & Eisenberg, 2010).

- Genetic factors: A history of mental disorders in the individual or his or her family puts the individual at a higher risk of developing depression, especially when

linked with other risk factors that are often present in the university setting (Hunt & Eisenberg, 2010).

2.3.2.5 Depression as a risk factor. Tjia et al. (2010) propose that available information is insufficient to understand all the causes and consequences of student depression comprehensively. Future studies are needed to identify personal and campus-related features that influence depression.

Although we may not know all the triggers that can prompt depression in university students, it should also be highlighted that once students exhibit depressive symptoms, individuals can exhibit dysfunctional attitudes and behaviour that lead to a downward spiral of depression (Abela et al., 2011). Therefore, depression itself can be viewed as a risk factor that can lead to further complications for the student, such as chronic depression, other mental disorders, and suicide in some cases (Buchanan, 2012; Abela et al., 2011).

When an individual forms negative cognitive attitudes, the chance that he or she may suffer from depression in later stages of his or her life increases (Abela et al., 2011). Evidence indicates that depression can impair an individual's functioning, rendering him or her less able to perform as parents, students, and/or employees (Buchanan, 2012). Depressed individuals have also been known to perceive themselves in a worse condition than people diagnosed with a physical chronic illness (Buchanan, 2012).

Among university students, depression has been associated with the following: decreased academic productivity and decreased GPA scores; acute infectious illness; increased levels of smoking and alcohol consumption; increased levels of anxiety; withdrawal from university; increased self-injurious behaviour; suicidal ideation; and suicide (Buchanan, 2012).

As seen from the risk factors mentioned earlier, depression leads to attitudes and behaviour that are likely to trigger more depressive symptoms. This perpetuates the problem experienced by students and can lead to a downward spiral of depression for them (Abela et al., 2011).

Many consider the transition from high school as an important time in their lives to develop intervention methods that could reduce or prevent the onset of mental disorders. Depression, along with other mental disorders, can inhibit students from formulating valuable intervention methods for these difficulties (Hunt & Eisenberg, 2010). For this reason, preventing, detecting, and treating mental disorders among university students are promising

avenues for addressing the early onset of mental disorders. Furthermore, doing so may have extensive benefits in reducing the effect that such disorders have on student's educational, social, and economic situations (Andrews & Wilding, 2004).

2.3.3 Awareness of depression in the university student population. Research on the prevention of depression in tertiary student populations indicates that depressive disorders are the most prevalent psychological disorders experienced by university students (Bowman & Payne, 2011; Buchanan, 2012). Individuals are most likely to have their first onset of depression during or shortly before the typical university age (Dwyer et al., 2014; Eisenberg et al., 2007b; Hunt & Eisenberg, 2010; Kessler et al., 2005). Students who have not been educated about depression and are not aware of the symptoms of depression could suffer from depression for years before they identify it as an issue and seek treatment. Studies have found that an average delay of 11 years was noted between the onset of a mental disorder and seeking treatment (Hunt & Eisenberg, 2010). Awareness that one is suffering from depression is a vital first step in seeking help for depression (Kranzler et al., 2015).

There is increasing acknowledgement of the role of regulating emotion in the development and maintenance of psychopathology (Kranzler et al., 2015). Regulation of emotional is a multidimensional construct consisting of many different processes (Kranzler et al., 2015). Although this research does not consider emotional regulation specifically, it considers awareness of help-seeking behaviour. One of the initial steps in regulating emotional is emotional awareness or the ability to identify and label internal emotional experience. Therefore, awareness of depressive symptoms would be the first step in deciding to seek help (Kranzler et al., 2015).

Individuals differ in their ability to notice and attend to internal emotional cues, and these differences affect an individual's capacity for regulating emotion. Emotional awareness develops during middle childhood and adolescence. In early childhood, children can identify and report basic emotions (e.g., anger, sadness, or happiness). When children enter middle childhood, they become more competent at self-reflection and possess emotional vocabularies that are more complex (they begin to experience and report on secondary emotions such as embarrassment and pride). By the time children reach adolescence, the development of their abstract and metacognitive abilities allows greater capacity to reflect on their emotions (Kranzler et al., 2015).

Research indicates that individual differences in emotional awareness may contribute to subsequent depressive symptoms (Kranzler et al., 2015). Emotional awareness allows individuals to identify and interpret their emotions easily and accurately, and thus to cope effectively using adaptive forms of expressing emotion and active strategies to solve problems (Monti & Rudolph, 2014). Adaptive coping and responses to stress may protect individuals from depression. Research links deficits in emotional awareness with more depression in both clinical and non-clinical samples (Monti & Rudolph, 2014).

A study by Kranzler et al., (2015) indicated that low baseline emotional awareness predicted both anxiety and depressive symptoms across a one-year period. This suggests that emotional awareness constitutes a transdiagnostic factor in predicting depression and anxiety, and as such, awareness is a beneficial component of treatment and prevention programmes. Kranzler et al., (2015) argue that the development of awareness and transdiagnostic treatment and prevention programmes increases the significance of identifying common factors that contribute to or maintain symptoms across a range of disorders.

Monti & Rudolph, (2014) propose that emotional awareness is an important point of intervention, as core components of emotional awareness, such as the ability to identify emotions, can be enhanced when individuals engage in therapy. Addressing emotional awareness while treating depression may be particularly significant, as research suggests that deficits in emotional awareness undermine positive treatment outcomes following psychotherapy. Difficulty identifying and expressing emotions may prevent individuals from being able to engage in therapy effectively (Monti & Rudolph, 2014).

Moutier et al. (2012) undertook a study to address depression and suicide among physicians at a medical school in the USA. The study launched a Suicide Prevention and Depression Awareness Programme in 2009 that focused on the mental health of medical students, residents, and faculty physicians. Of the 2 860 medical students, residents, and faculty physicians who received the e-mail invitation in the first year, 374 individuals (13%) completed screens, 101 of the 374 (27%) met criteria for significant risk for depression or suicide, and 48 of the 374 (13%) received referrals for mental health evaluation and treatment. The research advocated the continued revision of their counsellor's letter of response for at-risk students and improved their means of disseminating the educational outreach module by making students aware of resources available to them. The development of programmes such as these constitutes a vital step in the critically important task of

increasing well-being, treating depression, and preventing suicide in all professional fields and has the potential to help improve and save lives (Moutier et al., 2012).

A similar study done by Tjia et al. (2010) set out to explore the factors associated with the undertreatment of depression in medical students. They administered a cross-sectional Beck Depression Inventory and sociodemographic questionnaire to students at a medical school, defining their outcome measure as the use of counselling services or antidepressant medication. Three hundred and twenty-two student participants (71.6%) completed the questionnaire. Forty-nine students (15.2%) were classified as depressed, and ten (3.11%) reported experiencing suicidal ideation during medical school, but only 13 (4.04%) of the depressed students reported seeking treatment. The study concluded that the prevalence of treatment for depression among medical students was low and did not vary by severity of depression or suicidal ideation.

Research on the prevalence and incidence rates of depressed individuals in the university student population indicates that interventions are lacking, and there are considerable gaps in the literature on preventing depression in university students (Buchanan, 2012). Furthermore, there are strong suggestions for implementing depression-prevention strategies in at-risk populations and designing specific interventions to prevent the onset of clinical depression in these groups (Buchanan, 2012).

2.3.4 Help-seeking behaviour of students. Multiple studies highlight untreated mental disorders as highly prevalent in student populations and their findings are consistent with findings regarding the general population (American College Health Association, 2008; Hunt & Eisenberg, 2010; Kessler et al., 2005). The American College Health Association (2008) found that among college students in the USA, only 24% of the students diagnosed with depression were receiving treatment for their disorder. This finding is reiterated in a study conducted by Eisenberg, Golberstein, and Gollust (2007a), who found that fewer than half of the students who screened positive for major depression or anxiety disorders had received any professional assistance in the previous year. These consistent findings across the literature are a matter of particular concern when one considers that failure to seek early treatment for mental disorders is associated with a longer course of illness and relapses that occur more frequently (Hunt & Eisenberg, 2010).

Many reasons have been identified for students not seeking help for mental concerns. These include a lack of awareness that one is suffering from a mental disorder, a lack of

psychological support facilities available for students or awareness thereof, reluctance of students to engage with psychological services (Eisenberg et al., 2007a), time constraints, and financial constraints (Hunt & Eisenberg, 2010).

One of the most common and alarming themes identified in the literature regarding students not seeking help is the reluctance of students with mental disorders to engage in help-seeking behaviour (McAuliffe et al., 2012). The Health Belief Model, which will be discussed in more detail in Chapter 3, suggests that certain beliefs influence an individual's decision to seek help for a problem. These influential beliefs include the perceived susceptibility and severity of a disorder, the perceived barriers for seeking treatment, the perceived benefit of seeking treatment for the disorder, and modifying variables such as demographics and psychosocial variables (Rathbone, 2014). The Health Belief Model has been used both physical disorders and to explore the help-seeking behaviour of the general population due to mental health problems, including depression (Rathbone, 2014).

Individuals might be reluctant to seek help for various reasons, but the Health Belief Model believes that all these reasons ultimately stem from opinions that individuals hold towards psychological assistance for mental disorders (Henshaw & Freedman-Doan, 2009). In a study conducted by Leong and Zachar (1999), they explored whether individual's opinions about mental health acted as predictors of help-seeking behaviour due to psychological issues. They found that individuals who believed that mental health support was less socially restrictive, less authoritarian, and more compassionate had a significantly more positive opinion towards help-seeking attitudes for psychological assistance compared to individuals who stigmatised psychological assistance and the individuals who required those services.

Research also indicated that individuals who had previously, or were currently receiving professional assistance for their mental disorders were more likely to seek assistance and were also more likely to see the benefit in these services compared to individuals who had never received assistance for their mental disorders (Hunt & Eisenberg, 2010). Similar results were identified in the literature review conducted by Hunt and Eisenberg (2010), namely that students from lower socioeconomic backgrounds were less likely to seek assistance for mental disorders despite the fact that seeking assistance at the university would pose no financial burden on the students. In some instances, even when students were covered fully by their parent's health insurance, many still did not seek help, out of fear that their parents

would find out that they were seeking treatment for psychological issues (Eisenberg et al., 2007a). The findings of these studies suggest that perceptions and behaviour about seeking help may be established largely from the past. (Eisenberg et al., 2007a). Family or cultural beliefs, negative past experiences, or lack of availability of these services could influence a student's perceptions regarding not seeking help during their university years (Eisenberg et al., 2007a).

Another factor identified in the literature that inhibits students from seeking help for mental disorders is the fear of stigmatisation. According to Hunt and Eisenberg (2010), stigmatising attitudes of students about mental illness are associated with lower help-seeking behaviour. Students can experience fear of embarrassment and shame about disclosing details about their mental health disorders, especially at the beginning of their university experience (McAuliffe et al., 2012). McAuliffe et al. (2012) found that students from nursing, social work, and teaching departments who disclosed their mental health status did not know to whom they should disclose this information, what would happen to the disclosed information, and who had access to this information once it had been disclosed. In the medical faculty, students associated help-seeking behaviour with greater stigma and cited widespread avoidance of disclosure of problems (McAuliffe et al., 2012).

Literature has shown that academics working at universities can stigmatise students who suffer from mental disorders (McAuliffe et al., 2012). Faculty staff are often unsure how to respond to students who disclose mental disorders, and only 67% of staff members believe that students with mental disorders should be given special consideration in their academic process, although most physical disabilities are offered this special consideration. Evidence shows that students are more likely to be treated negatively for a mental disorder when compared to students with physical disabilities (McAuliffe et al., 2012).

Shaddock (2004) believes that the issue of inconsistent attitudes and responses of university staff to students with mental disorders may be somewhat compounded by the personal experiences and level of empathy of the staff. Academics who themselves have suffered from mental disorders are more likely to be supportive and willing to work with students with mental disorders (McAuliffe et al., 2012). Academic staff in Shaddock's (2004) study also mentioned feeling frightened and unprotected by their employing university in response to the behaviour of some students with mental disorders, which made them less likely to want to engage with students suffering from mental disorders. Consequently,

Shaddock (2004) believes that improving health services and education programmes about mental health on campus, as well as teacher training and an improvement in increased awareness of mental disorders and mental health should be emphasised. Shaddock (2004) believes that this will not only assist with the behaviour towards students known to be suffering from a mental disorder already but can also encourage the removal of stigma towards students with these disorders. In turn, this may inspire other students to come forward with their difficulties. This is extremely important for universities to do, as it is believed that failure to engage with support services could be a primary factor in completed suicides of students (McAuliffe et al., 2012).

McAuliffe et al. (2012) believe that there is still insufficient information regarding help-seeking behaviour of depression in the student population to know whether students fail to seek help due to a lack of available or suitable mental health services, or due to the student's own reluctance or fear to engage with such services, or a combination of both. Promising examples of such mental health development programmes can be seen in the USA, such as the development of the National College Depression Partnership, which is led by New York University. This programme includes an expanding network of university campuses collaborating in an effort to deliver screening, early intervention, and more constant, cohesive treatment of depression in student populations (Hunt & Eisenberg, 2010). There has also been the development of the American Foundation for Suicide Prevention's College Screening Project, which uses web-based intervention to increase help-seeking behaviour in university students (Hunt & Eisenberg, 2010).

Similar benefits have been identified in an Australian study of online intervention for promoting well-being in university students. Ryan, Shochet, and Stallman (2010), found that while students were less likely to seek help from traditional student services in times of escalating psychological distress, their intention to use online mental health interventions increased. Online mental health interventions may be a solution to the low rate of help-seeking behaviour among students. Many students are now able complete their degrees purely online without any face-to-face interaction. Thus, online mental services could be a new avenue of mental health intervention that should be explored, as online services could assist students who otherwise may not seek professional help (Ryan et al., 2010). A number of students could find online services useful, as it can be considered more convenient and time saving in comparison with traditional services and could reduce feelings of vulnerability

in some students, as they do not have to deal with anyone directly (Piper & MacDonald, 2008).

The above-mentioned studies suggest that awareness and educational drives about depression may be especially effective for reducing the unmet needs of students suffering from depression. Factors related to belief and knowledge about depression were linked strongly to the perceived need for using help and services and frequently stated as reasons for students not using mental health services. Campaigns focusing on knowledge and awareness of depression could address why many students do not know about the availability and potential value of such services and aid in reducing stigma regarding depression (McAuliffe et al., 2012).

2.4 Depression at South African Universities

Very little research assists in providing a profile of students seeking help for mental disorders in low- to middle-income countries (LMICs) such as South Africa (Bowman & Payne, 2011).

Research conducted on the mental health of students has been undertaken in LMICs such as Nigeria, Namibia, Uganda, and India; however, all those studies were undertaken before 1980. A recent international overview of the presenting problems and demographic variables most commonly associated with students' seeking counselling included South Africa and Turkey as the only "non-western" contexts in its analysis (Bowman & Payne, 2011). This highlights how mental health of students has not been prioritised as a focal research area in higher education systems in LMICs (Bowman & Payne, 2011).

South Africa has made a concerted effort to afford equity of access to tertiary education in the country. The government sees this as an important means of entrenching democracy and supporting development in the country (Bowman & Payne 2011). The South African journey to democracy has resulted in fundamental changes in the relationship between race, economic access, and social inequality in the tertiary education sector. The transitions that have occurred since the fall of apartheid have created shifts in the demographic profile of the tertiary education enrolment landscape in South Africa (Bowman & Payne, 2011).

In 2011, the South African gross enrolment figure for tertiary education was 15%. This percentage is more than three times the percentage of the enrolment figure (4%) in 1970 (Bowman & Payne, 2011). Furthermore, the post-apartheid period has witnessed a

considerable increase in the number of black students entering universities (Bowman & Payne, 2011). In 1995, black students made up approximately 49% of all tertiary education enrolments. By 2007, this figure had reached 63% (Council on Higher Education, 2009). In addition to this, the post-apartheid period has seen an exponential growth in female enrolments at South African universities, and by 1995, females for the first time began to outnumber males at universities in the country (Bowman & Payne, 2011). By 2007, the proportion of women enrolled at tertiary institutions in South Africa had reached 55.5% (Council on Higher Education, 2009).

As universities follow through on the country's mandate in attempting to accelerate the growth of equity, the composition of current university students will differ even further from that of South African student populations prior to the dismantling of apartheid (Bowman & Payne, 2011). This is important to note, as the majority of research conducted in South Africa that touch on the awareness and help-seeking behaviour of depression in university students was conducted before or during the transition stage from apartheid to a free South Africa. Nicholas (1997a) published an overview of counselling in South Africa, in which annual reports of counselling centres of various South African universities were selected and surveyed. A limitation of this overview is the fact that these results were published in 1994, which was the year when apartheid was dismantled formally. Therefore, the overview does not represent the university student population after apartheid accurately (Nicholas, 1997a).

Nicholas (1997b) conducted a study in which he analysed 580 students of the University of the Western Cape, a historically black university, during the 1993 academic year. From his results, Nicholas found that first-year students (27.8%) and females (55%) constituted the majority of students making use of counselling services through the year. He also identified depression, financial pressures, academic work problems, orientation information, and career decisions as the five leading reasons for students utilising the counselling services (Nicholas, 1997b).

Naidoo (1999) also conducted an analysis of counselling services at the University of the Western Cape during the 1996 academic year. His results showed that the overall utilisation rate of the university was 9%. Like Nicholas (1997b), Naidoo (1999) found that female students (58.2%) were more likely to seek counselling help compared to their male counterparts. In his study, Naidoo (1999) found that third-year students accounted for the greatest share of counselling users, whereas Nicholas (1997a) found that first-year students

were the most frequent counselling users. Naidoo's (1999) study showed that career choice (30%) and depression (27%) were the two leading concerns that led to students seeking help.

Although the studies by Nicholas (1997a, 1997b) and Naidoo (1999) are useful, they do not represent the student population after apartheid accurately, as Nicholas (1997a, 1997b) drew on data in the years when apartheid was being dismantled, and Naidoo's (1999) study was drawn from a sample group of almost exclusively back students, which again is not an accurate indication of student populations after apartheid (Bowman & Payne, 2011).

Bowman and Payne (2011) aimed to address this issue in their study by looking at post-apartheid students receiving counselling at South African universities. They extracted student data from two counselling centres based at the University of the Witwatersrand that provided services to 831 students during 2008. A comparison group was formed from the 26 243 students who did not seek counselling during 2008. The data were analysed using logistic regression. Bowan & Payne's (2011) results showed the following:

1. Black, female students between the ages of 21 to 25 were most likely to receive counselling, and presenting problems varied by population group.

2. Although females made up only approximately 50% of all students at the university during 2008, females disproportionately sought counselling at the centres.

3. Disproportional representation was also evident in the population group category with black students representing the largest client grouping (Bowman & Payne, 2011).

4. Black and coloured students respectively were approximately 3.2 and 2.3 times more likely to seek counselling than white students were during 2008.

A possible explanation for black students seeking counselling disproportionally could be that for many black students, they might have been part of the first generation of individuals from their families to attend university (Bowman & Payne, 2011). Often, the adjustment from high school to university is particularly difficult and traumatic for first-generation students (Sennett et al., 2003). In the South African context, the majority of first-generation students most likely may be black Africans who were forced into disadvantaged educational and socioeconomic circumstances brought about by the inequities of apartheid. Sennett et al.

(2003) believe that first-generation black students may be particularly vulnerable in this transition.

Kagee, Naidoo, and Mahatey (1997) argue that, owing to the gross historic inequality in the provision of resources caused by apartheid, students from disadvantaged backgrounds regularly are underprepared for the demands of university when compared to white students. They suggest that this lack of pre-university preparation may lead to students experiencing high levels of anxiety and feelings of alienation from their lecturers, academic discourse, and the institution.

In addition to this, Sennett et al. (2003) identified a number of risk factors to which black students are more likely to be exposed, in comparison with other students. These risk factors are likely to make the transition to university more challenging. Such risk factors include low levels of education among parents, adapting from a traditional African to a modern western culture, financial strains, transport problems, adapting from a rural to an urban environment, and the difficult transition of being identified as a high achiever in a small community, to being only one of many such students at university. Finally, leaving the closeness and support of extended families and small communities and living in impersonal and isolating residences are factors that often may make the transition to university more difficult for black students (Sennett at al., 2003).

Another significant risk factor for black students in the current South African context is that many black African students come from traumatised communities that are subject to high levels of poverty and violence. Isolated traumatic events such as bereavements or disruptions in family or interpersonal relationships can impair a student's capacity to adjust significantly (Sennett et al., 2003). In South Africa, researchers have noted the constant nature of stress and trauma facing black African communities. This inevitably affects black students' performance and adjustment at university (Sennett et al., 2003). It should be noted that other racial groups often experience similar or equally traumatising events in the South African context; however, no research could be found on this when reviewing literature. The researcher believes that most research of this nature has been conducted exclusively on black students due to the oppression they faced during the apartheid era.

Moreover, a further dimension that affects black African students adjusting to university may be related to the institution itself. Of significance here are students' experiences and perceptions of the university environment. Leon and Lea (1988, as cited in Sennett et al.,

2003) found that 60% of black African students reported that they did not feel integrated with the university. In addition, their research found that black African students believed that previously white universities did not address social or political needs of black students adequately and that these universities represented only the interest of white students. In South Africa, results were different and in contrast to most of the studies conducted in North America, which found no difference in student adaption between black and white students at integrated American universities (Sennett et al., 2003). In South Africa, significant differences were noted, as black students possessed fewer social support structures, while facing greater social and physical relocation than white students do at the same time (Sennett et al., 2003). Again, it should be noted that these findings could ring true for other races that were oppressed *duri*ng apartheid; however, little to no literature could be found that addressed the difficulties that affected other racial groups in South Africa.

A lack of research on this topic has provided a limited profile of students suffering from depression and receiving counselling in LMICs (Naidoo 1999, Nicholas 1997a, 1997b, Sennett et al., 2003). These studies are essential to understanding student mental health profiles and counselling needs in such contexts better (Sennett et al., 2003). Mental health, particularly student mental health, has not been prioritised as a focal research area in higher education.

2.5 Summary

From the literature reviewed above, it is hoped that the severity of depression has been represented clearly to the reader. The negative effects of the disorder are far-reaching and influence academic success, social relationships, and overall quality of life (Hunt & Eisenberg, 2010; Zivin et al., 2009). The negative effects of depression are important to note, as they can alter the way in which a student experiences and performs at university significantly.

Moving on to university is a stressful time in many students' lives, as it exposes them to many risk factors that could lead to the onset of depressive symptoms (Bayram & Bilgel, 2008). To assist students with this transition, universities should make concerted efforts to improve students' awareness of mental disorders and their own emotional awareness. Awareness of depression is limited in the student population (Dwyer et al., 2014), with lack of education, lack of desire by students to seek help, and stigmatisation being some of the

leading causes why students do not seek help. Individuals are more likely to seek help if they are emotionally aware that they are struggling with depressive symptoms (Kranzler et al., 2015) and at the same time believe that depression is an illness that is severe enough that one should seek help (Rathbone, 2014).

Similar to international studies, South African literature reflects the difficulty experienced by students when changing to university, as well as the growing concern of depression in the student population. South African students are exposed to more risk factors during this transition when compared to First World countries. Financial constraints, inequality caused by apartheid, disadvantaged backgrounds, and violent and traumatic environments act as significant risk factors that can exacerbate depressive symptoms when changing to university (Rathbone, 2014). Literature in the South African context is limited, and there have been numerous calls for more research on the topic that specifically focuses on the mental health of university students (Naidoo, 1999; Nicholas 1997a, 1997b; Sennett et al., 2003). This study hopes to address this call for more research and provide useful information for further research on the topic.

Chapter 3: Research Methodology

3.1 Introduction

Chapter 1 stated that the purpose of this research was to describe the awareness and help-seeking behaviour in the first-year psychology student population at the University of Pretoria. This study was non-experimental in nature and aimed to recognise the prevalence of depression in the sample population during their first-year transition to university, as well as the prevalence of awareness and help-seeking behaviour due to depression in this sample.

To answer these research questions, the researcher made use of a quantitative descriptive research design consisting of a survey design. In this chapter, the research design is described and discussed first, followed by a discussion of the research paradigm and the theoretical paradigm utilised in this study. A full discussion of the sampling techniques utilised and a description of the sample, including the demographics, follow to provide the reader with a clearer depiction of the sample population. An explanation of the data-analysis technique used is presented, followed by a description of the measurement instrument used in the study. This chapter concludes with a discussion of the reliability and validity of the study, and lastly the ethical considerations.

3.2 Research Design

This study was non-experimental and aimed to obtain simply a description of a variable, namely the awareness and help-seeking behaviour due to depression. Therefore, descriptive research was used as the research design. Descriptive research seeks to measure or describe a variable or variables as they occur naturally and aims to gain better understanding of a variable (Gravetter & Forzano, 2009). Descriptive research cannot answer 'how' or 'why' questions regarding the variable, it simply provides a 'picture' of a variable (Gravetter & Forzano, 2009; Terre Blanche, Durrheim, & Painter, 2014). By asking a sample population questions regarding a specific topic, a descriptive research study aims to provide a description of the topic and the sample, for the purpose of constructing quantitative descriptors of the attributes of the larger population of which the participants form part (Groves et al., 2011).

In this study, the variable investigated was depression in first-year psychology students at the University of Pretoria, and in particular, the aim was to explore students' awareness and help-seeking behaviour due to depression.

A questionnaire was used to collect data from the participants. Generally, surveys are interested in gathering data from a large group of participants. According to Terre Blanche et al. (2014), questionnaires should be developed validly and reliably. The following aspects are important points to consider when creating a questionnaire:

- Questions should be unambiguous and context appropriate and should ask about accessible information.
- The language should be simple and clear, avoiding jargon/slang, double-barrelled questions, and leading or loaded questions.
- Categories should encompass all possible responses (Terre Blanche et al., 2014).

The questionnaire included an online demographic questionnaire, an online assessment for depression (the Beck Depression Inventory [BDI–II]), a section focused on the participants' subjective views on depression, as well as a section on awareness and help-seeking behaviour. Participants were asked questions pertaining to the nature of information generated by the online assessment, as well as questions about what implications the results had for their help-seeking behaviour due to depression. The assessment was administered online via Survey Gizmo (a professional online survey software programme that allows tailor-made online surveys and questionnaires).

The researcher advertised the study to psychology students through their online student portal, better known as the "Click-UP" student portal. Participation in the study was voluntary and confidential. Questionnaires were administered only to students who consented to participate in the study and signed the consent forms (Gravetter & Forzano, 2009). Consent forms were made available online before the student was able to continue with the survey.

3.3 Research Paradigm

This research adhered to a positivist paradigm and made use of a quantitative methodology. According to Terre Blanche et al. (2014), paradigms are inclusive systems of solid practice and thinking that define for researchers the nature of their question. In a positivist paradigm, a researcher believes that what is to be studied consists of a stable and unchanging external reality, so that they can adopt an objective and detached stance towards that reality (Terre Blanche et al., 2014).

Ontologically, positivism believes that there is an objective reality that is identifiable and measurable (Willig, 2008). From an epistemological standpoint, it assumes people can know this reality and use symbols to describe and explain this objective reality accurately (Ponterotto, 2005).

The researcher takes an objective stance towards the research participants by asking them to complete online surveys. Positivists believe that the researcher and the research respondent are independent of each other and that by following scientific and standardised procedures, the researcher can study the respondent and topic objectively (Ponterotto, 2005). Participants volunteered to participate in an online questionnaire; therefore, the study was circumscribed by the interest in the topic by first-year students registered for a module in psychology.

3.4 Theoretical Paradigm

This study is underpinned by the Health Belief Model (HBM), which essentially is a socio-cognitive theory developed in the 1950s by social psychologists Hochbaum, Rosenstock, and Kegels, who were working in the US Public Health Services. They wanted to identify reasons why individuals did not seek help for their health disorders (Henshaw & Freedman-Doan, 2009). The HBM theory hypothesises that individuals' help-seeking behaviour is determined by the following five factors (Henshaw & Freedman-Doan, 2009):

- The individual's susceptibility to the problem (depression was the problem in the case of this study).
- The individual's belief about the severity of the problem (if the problem is severe and disturbing the daily functioning of the individual).
- Does the individual believe that the intervention or preventative actions will be effective in reducing the problem?
- The individual's perceived barriers to seeking help for the problem (cost, stigma, time, etc.).
- Cues to action (instances that serve as a reminder to the individual of the severity or threat of a disorder).

The HBM attempts to predict health-related behaviour in terms of certain belief patterns. Emphasis is placed on the categories described above. The model is used to explain and

predict preventive health behaviour, as well as sick-role and illness behaviour. Other theories, including the Social Learning Theory, have contributed to the development of this theory (Henshaw & Freedman-Doan, 2009). The Social Learning Theory contributes to the HBM in different ways:

- Multiple sources for acquiring expectations
- Learning through imitating others
- Self-efficacy

The HBM states that the perception of a behaviour threat to personal health is influenced by at least three factors: general health values, which include interest and concern about health; specific health beliefs about vulnerability to a particular health threat; and beliefs about the consequences of the health problem. Once an individual perceives a threat to his/her health and is simultaneously cued to action, and his/her perceived benefits outweigh his/her perceived drawbacks, that individual is most likely to undertake the recommended preventive health action. Various variables (demographic, socio-psychological, and structural) can affect an individual's health behaviour (Wills & Gibbons, 2009).

Originally, this theory was designed to identify help-seeking behaviour for those in need of medical assistance; however, the theory also has been used successfully in studies focusing on help-seeking behaviour due to mental health disorders (Wills & Gibbons, 2009). This theory was chosen for this study due to the specific focus of the HBM to explain why individuals do and do not seek help for their health problems. The theory purports that an individual's help-seeking behaviour are based on their perceived susceptibility and severity of the disorder. The success of treatment from seeking help and the barriers that need to be overcome in seeking help place importance on "cues to action"; when individuals are reminded of the severity and implications of the disorder, this can often be conducted through awareness campaigns. The HBM states that individuals are more likely to seek help if they are provided cues that remind them of the severity of the disorder, and the implications that the disorder can have on the individual's life. Awareness raised through this study can be considered as a "cue to action" that acts as a reminder to the sample population of the implications that depression can have on one's life. Additionally, questions focusing on the five aspects that affect health-seeking behaviour (susceptibility, severity, benefit of treatment, barriers to treatment, and cues to action) according to the HBM were included in the

questionnaire. Analysis of the questionnaire was based on the five aspects identified by the HBM as factors that affect one's health-seeking behaviour.

A limitation of the HBM theory is that different questions are used in different studies to determine the same beliefs; consequently, it is difficult to design appropriate tests from the HBM and to compare results across studies. Another reason why research does not always support the HBM is that factors other than health beliefs also heavily influence health behaviour practices. These factors may include special influences, cultural factors, socioeconomic status, and previous experiences (Henshaw & Freedman-Doan, 2009).

3.5 Sampling

The individuals of interest in this study were registered first-year students who were enrolled in a first-year psychology module at the University of Pretoria. The sample population comprised any first-year students registered for a module in psychology who volunteered to participate in the online survey by accessing the link made available online. An explanation of the study, as well as a link to the study, was made available on Click-UP.

A self-selection, non-probability sampling method was used for this study, as students were able to choose to participate in the survey on their own accord, instead of being selected by the researcher to participate in the study. Owing to time and cost restraints, convenience sampling, a type of non-probability sampling, was selected for the present study. Convenience sampling relies on the ease of availability of participants and includes those who are willing to participate (Gravetter & Forzano, 2009).

Sampling techniques are divided into two categories: probability and non-probability sampling (Babbie, 2013). Probability sampling methods employ random sampling, which is a technique in which all members of the population have the same chance of being selected to participate. Since non-probability sampling techniques do not involve random sampling, the results cannot be generalised to a wider population (Gravetter & Forzano, 2009). As such, the results of the study cannot be generalised to the greater population but can only make inferences about the first-year psychology student population.

It should be noted that this sampling method could have limitations. This sampling method could lead to bias regarding the type of students who participate in this study, as students who decide to follow up on and participate in the study would do so under the

assumption that they have some form of interest in the topic of depression. In an attempt to mitigate this bias, the researcher sought to collect statistics from the student support centre regarding the number of students they saw who were suffering from depression. Those statistics would have been used as a baseline to determine any discrepancy regarding the number of participants who participated in the study and presented symptoms of depression, compared to the number of students who sought assistance at Student Support for their depression. However, when approaching Student Support at the University of Pretoria, the researcher was told that client data at Student Support were not available for research purposes. The researcher recommends that future studies be allowed access to the data, as it may increase the reliability of the results obtained. Additionally, the researcher recommends that follow-up research be conducted to identify trends regarding the psychology students who volunteered to participate in the study.

Another limitation of the self-selection, non-probability sampling method is that it is difficult to estimate the sample size in a self-selection sample, as the sample size is largely dependent on the number of interested respondents at the time (Gravetter & Forzano, 2009). Daniel (2012) provides a guideline for sample sizes of various types of studies employing non-probability sampling. For survey research, a sample size of between 150 and 1500 participants is advisable. Based on the above guidelines and considering that the University of Pretoria only has approximately 1900 students enrolled to study psychology, a sample size of 150 was the target for the study.

3.5.1 Description of the sample. Two hundred and thirty-two students volunteered to participate in this study. Of the 232 students who participated in the questionnaire, 98 had to be excluded from the final sample group, as they did not meet the inclusion criteria set by the researcher for this study. Eighty-eight students were excluded from the sample group, as they had been students at the university for more than one year and were either taking or repeating a first-year psychology module but were technically not first-year students. The other ten students were excluded from the final sample group, as they had completed the questionnaire only partially and therefore had missing data in their questionnaires.

This resulted in a final sample group consisting of 134 first year students registered for a module in psychology at the University of Pretoria. The 134 participants in the sample group varied on a number of different demographic characteristics, which are presented below.

3.5.1.1 Age of participants. Figure 3.1 shows the spread of ages of participants in the study. Seventy-eight participants were 19 years of age, which was the most common age of participants (58%). Only three (2%) of the participants were older than 21 years.

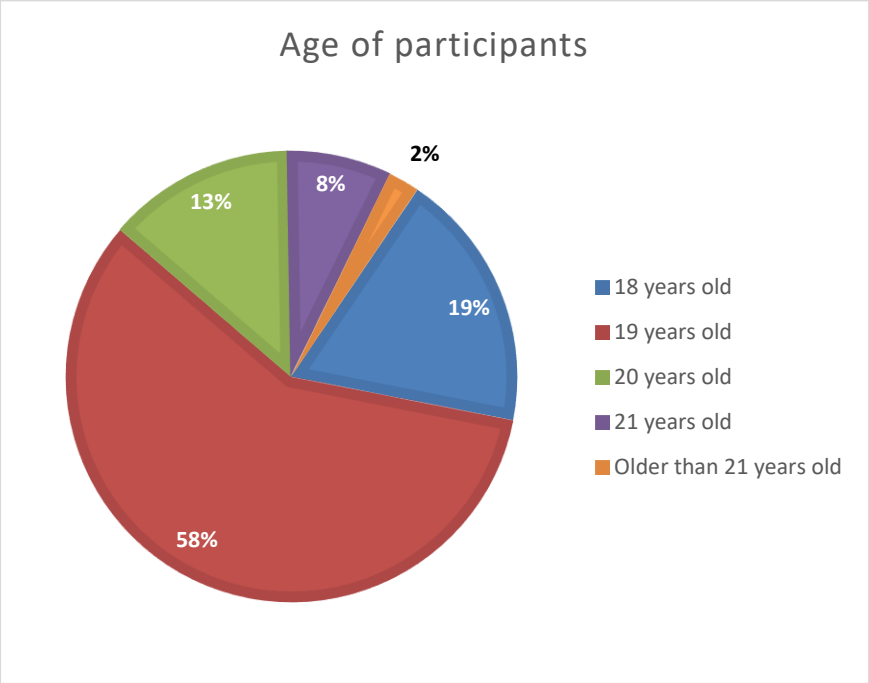

Figure 3.1. Age of participants.

3.5.1.2 Gender of participants. Figure 3.2 below indicates that more than three quarters of participants (84%, n = 113) were female, while only 16% were male (n = 21).

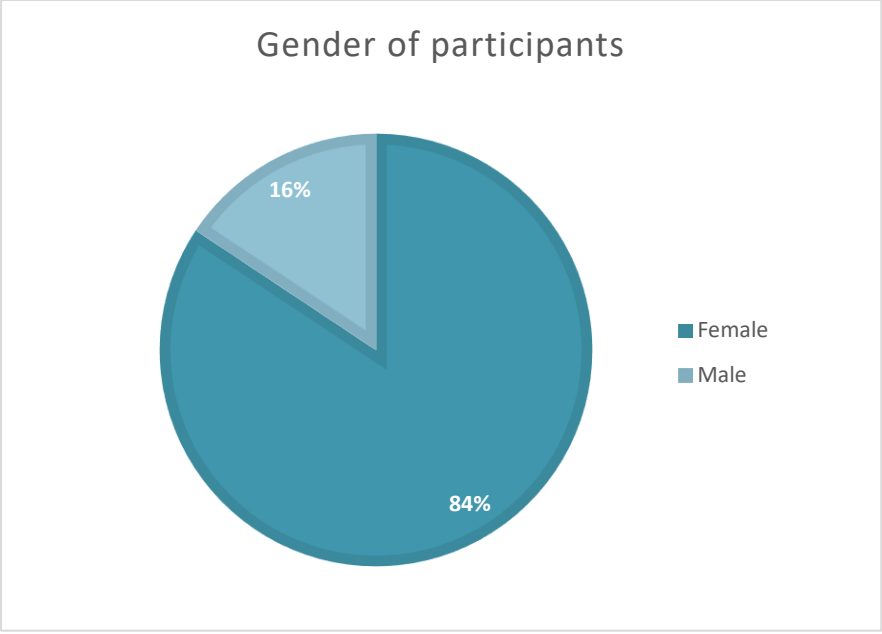

Figure 3.2. Gender of participants.

3.5.1.3 Race of participants. As shown in Figure 3.3 below, the vast majority of participants were white (74%, n = 99), followed by black participants (22%, n = 29). The minority included Indians, coloureds and "other" (half white, half Indian) respondents, comprising of 2.2%, 1.5%, and 0,75% of the total respectively.

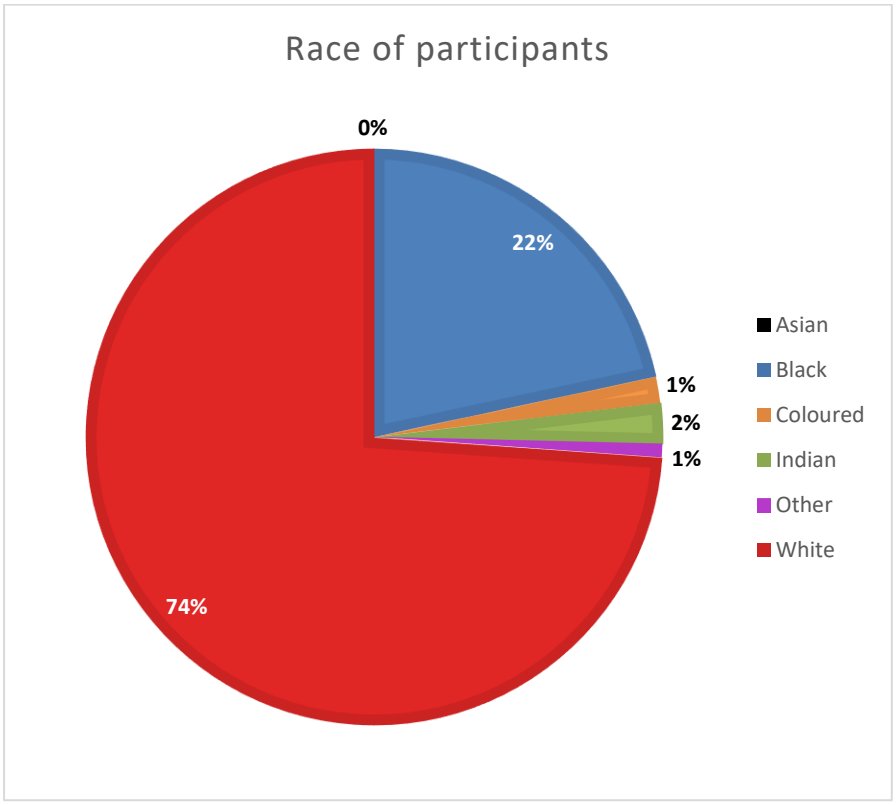

Figure 3.3. Race of participants.

3.5.1.4 Faculty of study of participants. Figure 3.4 below depicts the faculty in which the participants were enrolled. As can be seen, the largest number of participants (59%, *n* = 79) were enrolled in the Humanities Faculty, which was to be expected, as the Psychology Department fell under the Humanities Faculty. Following the Humanities Faculty, the second most common faculty in which participants participated in the study were enrolled was the Natural and Agricultural Sciences Faculty (19%, n = 26), which is mainly due to students who were enrolled to study a BSc Human Physiology, Human Genetics and Psychology degree. The Education Faculty (13%, n = 18) followed closely behind.

The least common faculties in which participants were enrolled were the Engineering Faculty (2% n = 2), Health Sciences Faculty (3%, n = 4), and the Law Faculty (4%, n = 5). No participants enrolled in the faculties of Economic and Management Sciences, Theology,

Veterinary Science, and Gordon Institute of Business Science (GIBS) participated in the study.

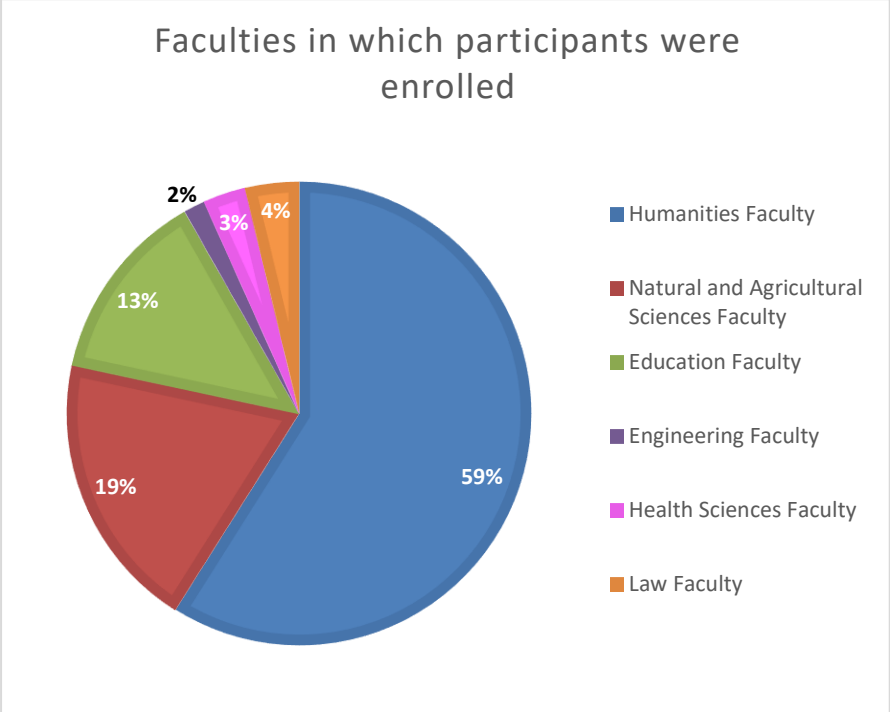

Figure 3.4. Faculties in which participants were enrolled.

3.5.1.5 Number of years participants were enrolled at university. The focus of this study revolved around the awareness and help-seeking behaviour of first-year psychology students. Therefore, students who had been enrolled at the university for more than one year were removed from the sample because the researcher aimed to identify how the transition to university affected the emotional well-being of first-year students. Therefore, students who had been enrolled at the university for more than one year would have had time to adjust to this transition, which would render the results of the data inaccurate.

3.6 Measurement Instruments

The online questionnaire that respondents completed for this study can be separated into three sections. The first section of the questionnaire focused on collecting demographic information from the respondents. The second section referred to the online screening instrument for depression (BDI–II), and the final section referred to additional questions that focused on the respondent's personal opinions of depression, help-seeking behaviour, and awareness of depression. All measurement instruments (sections 1, 2, and 3) are included in Appendix A.

3.6.1 Demographics. The researcher developed the demographic section of the questionnaire and included questions relating to gender, age, race, faculty of study, degree enrolled for, and number of years enrolled at the university. The analysis of these demographics provided the researcher with a description of the participants who participated in this study. The demographic section of the questionnaire was included to understand the fundamental characteristics of participants and to allow the researcher to inspect any noteworthy differences between responses on subsequent measures relating to demographics.

3.6.2 Beck Depression Inventory – Revision II. The Beck Depression Inventory II (BDI–II) was included in the online questionnaire to screen for depressive symptoms in the respondents. The BDI–II is one of the most widely used psychometric tests for measuring the severity of depression (Beck et al., 1996b). The development and clinical use of this instrument transformed the way in which mental health professionals, who had until then conceptualised depression from a psychodynamic perspective, conceptualised and understood depression. The BDI–II conceptualises and understands depression as being rooted in the person's own thoughts (Haaga & Beck, 1995). The BDI–II reflects cognitive symptoms, as well as somatic and vegetative symptoms of depression. As it provides only an estimate regarding severity of depression, it is important to be attentive to specific item content – special attention should be given to suicide ideation (Beck et al., 1996b). The researcher has previous experience in administering the BDI–II and worked under the supervision of Monique Bezuidenhout, who is a registered clinical psychologist, for this study. This ensured that the administration and interpretation of the BDI–II meets the requirements of the Health Professions Council of South Africa (HPCSA, 2011).

It should also be noted that over many studies, the Cronbach's alpha for the BDI–II ranges from $\alpha = 0.83$ to $\alpha = 0.96$ (Wang & Gorenstein, 2013). The Cronbach alpha score for the BDI–II for this study was $\alpha = 0.934$.

3.6.3 Personal opinions towards depression. The researcher also developed this section of the questionnaire and included questions concerning participants' personal opinions towards depression, the transition to university, awareness of depression, and help-seeking behaviour due to depression. Questions in this section took on three forms: Likert-scale, close-ended, and open-ended questions. For example, participants were required to indicate how healthy they believed their emotional well-being was before and since entering university. They were also asked how they found the transition to university life, measured by

a five-point Likert scale. Students were also asked about their own history of possible depression and how severe they believed depression as an illness was. Finally, students were asked whether they would seek help for depression if they had to present with depressive symptoms and what would hinder them in seeking help for depressive symptoms. Based on options provided in the questionnaire, many of these questions had additional open-ended questions where participants could elaborate on answers they had provided to the close-ended questions. This was to allow the researcher further insight into the personal opinions of students with regard to depression, awareness, and help-seeking behaviour.

3.6.4 Reliability. Positivist research generates predefined observational measures through conceptualisation and operationalisation and aims at measurement reliability. Researchers have to ensure that the numbers they use to represent reality corresponds with the nature of the attributes being measured. It is achieved through four processes, namely conceptualisation, operationalisation, validity, and reliability (Terre Blanche et al., 2014).

According to Sheehan and McGee (2013), possible adverse effects of positive screening for depression include potentially inappropriate labelling and treatment, as well as the effect of false positive results.

For this reason, Sheehan and McGee (2013) point out that it is important that the screening measures have strong psychometric properties, as well as a threshold for depression that minimises the rate of false positive results. For this reason, the BDI–II was chosen as the screening measure, as it is the most widely used and accepted instrument for assessing the severity of depression in diagnosed patients and for detecting possible depression in the general population (Beck et al., 1996b). It has been built on 35 years of accumulated psychometric data and clinical experience (Beck et al., 1996b). The BDI–II is considered an accurate diagnostic measure for depression. It has shown to yield strong psychometric properties with regard to reliability and validity (Beck et al., 1996b), thus increasing the reliability of results generated from the assessment.

Smarr & Keefer (2011) highlight that the BDI–II reflects Cronbach's α for the revised BDI normative psychiatric samples that range from 0.79–0.90. They also indicate that the test-retest reliability of the BDI–II for college students was 0.64 – 0.90 (Smarr & Keefer, 2011). Segal, Coolidge, Cahill, & O'Riley, (2008) conducted a study with 223 young adults in which the results indicated a Cronbach α of 0.92

The BDI–II has also displayed high construct validity with the medical symptoms it measures. Beck, Steer, Ball, and Ranieri (1996a) reported a coefficient alpha rating of 0.92 for outpatients and 0.93 for college student samples.

3.6.5 Validity. According to Kimberlin and Winterstein (2008), validity refers to the extent to which the instrument measures what it is intended to measure. According to Terre Blanche et al. (2014), validity means that the measure should provide a good degree of fit between the conceptual and operational definitions of the construct and that the instrument should be usable for the particular purposes for which it was designed. The study made use of construct validity, which refers to the extent to which it measures the theoretical construct or trait that it is supposed to measure (Kimberlin & Winterstein, 2008).

3.6.5.1 Internal validity. In any research study are a large number of extraneous variables that could affect the study (Shadish, Cook, & Campbell, 2002). A possible confounding variable for depression assessments may be the influence of anxiety related to upcoming tests or exams on results. For this reason, the researcher ensured that data collection took place after the July holidays to ensure that participants were not influenced by the writing of tests or exams.

3.6.5.2 External validity. External validity refers to the ability of the results of a study to be generalised to the broader population (Alwin, 2010). In this study, the results were not generalisable to all students on the campus, due to the use of a non-probability sampling method (Adler & Clark, 2014). Therefore, the external validity of the study is low.

3.6.6 Strengths and limitations of quantitative research. The main strength of quantitative research is that it allows the researcher to measure and analyse the data objectively (Ponterotto, 2005). Another strength of quantitative research includes clear documentation regarding the content and application of the survey instruments that are provided so that other researchers can assess the validity of the findings. Lastly, standardised approaches allow the study to be replicated in different contexts or over time with the production of comparable findings (Shadish et al., 2002).

A limitation of quantitative research is that the context of the study is not considered. Quantitative research does not study phenomena in a natural setting or discuss the meaning things have for different people. Another limitation is that a large sample of the population must be studied. The larger the sample of people researched, the more statistically accurate

the results will be (Hassan & Edward, 2018). Bryman (2006) identified four limitations of quantitative research: First, researchers of quantitative research are unsuccessful in discriminating individuals and societal organisation from the way in which people interpret the world. Second, some individuals are of the opinion that the means by which the data are measured is not always precise. Likely, some individuals may misinterpret the questions of the questionnaire distributed by the researcher, and the answers may not be accurate. Third, the respondents may sometimes not have enough knowledge to answer the questionnaire adequately, which will result in the data not reflecting the current trend. Fourth, the investigation of interaction among variables produces an inert perspective of society that is mutually dependent on the individual's life (Bryman, 2006).

The main limitation of this research was the use of a non-probability sampling method, (a non-random sampling method), which made it difficult to draw definitive conclusions from the data. For example, because the majority of the participants were white females aged 19 studying in the Faculty of Humanities, one cannot say that the results will remain consistent for other population groups. The researcher selected to utilise the non-probability sampling method because it was the most applicable method when considering time constraints, financial limits, and the sensitivity of the topic being studied. As the study focused on aspects of depression, it was important to ensure that no participants felt any pressure to participate in the study and did so out of their own free choice. Therefore, a voluntary (non-probability) sampling method was the most suitable approach.

3.7 Data Analysis

3.7.1 Analysis of questionnaire. The analysis of the questionnaire is divided into four parts, namely analysis of the BDI–II questionnaire, analysis of the transition to university life, analysis of the awareness of depression, and analysis of help-seeking behaviour of participants.

With regard to the BDI–II, the researcher scored the results of the assessment. The BDI–II contains 21 questions, and each answer is scored on a scale value of 0 to 3 which allows respondents to score anywhere between 0 and 63 (Beck et al., 1996b). Higher total scores indicate more severe depressive symptoms.

The BDI–II divides scores for depression into the following ranges:

- 0 to 13: minimal depressive symptoms
- 14 to 19: mild depressive symptoms
- 20 to 28: moderate depressive symptoms
- 29 to 63: severe depressive symptoms

With regard to the self-formulated and demographic questionnaire, descriptive statistics such as frequency distributions and means were obtained for all responses, as the aim of the research was to investigate awareness of depression and related help-seeking behaviour. Various demographic variables were also analysed to identify at-risk groups with regard to depression, and to generate further insight into the phenomenon of depression in the student population.

3.7.2 Analysis of results. Data analysis is the process of reducing accumulated data to a manageable size, develop summaries, look for patterns, and apply statistical techniques (Cooper & Schindler, 2006). In this study, data were analysed by using the Statistical Package for the Social Sciences (SPSS), Version 24. Descriptive statistics were used to gain a better understanding of the sample population and to determine the frequency of responses to the Likert-scale questions. T-tests and ANOVAs were utilised to identify if any statistically significant differences between variables were evident in the study. Furthermore, the researcher made use of content analysis to analyse themes that were generated from participants' responses to a number of open-ended questions in the questionnaire.

The researcher then interpreted the statistical results in consideration of the research question to determine if the results were consistent with the literature and theories, in this case the awareness and help-seeking behaviour in the first-year psychology student population at the University of Pretoria. Finally, the researcher utilised the results of the data analysis to offer recommendations and to determine if further research was needed (Cooper & Schindler, 2006).

3.8 Ethical Considerations

When conducting a research study, one always needs to consider ethical issues. These considerations are covered in the guidelines set by the Health Professions Council of South

Africa (HPCSA), ethical rules of conduct for practitioners registered under the Health Professions Act, 1974, as stated in annexure 12 – rules of conduct specifically pertaining to psychology (HPCSA, 2004). The relevant sections of the rules of conduct specifically pertaining to psychology, and the way in which they were adhered to in the present study are discussed next.

Firstly, Section 87 states that a researcher must obtain written approval from an institution to conduct research, full details of the proposed study must be supplied to the institution beforehand, and only once approval has been granted by the institution, the researcher can begin with the study (HPCSA, 2004). Before the commencement of this research study, ethical clearance was obtained from the Research and Ethics Committee of the Faculty of Humanities at the University of Pretoria. The ethics committee offered clearance for the study with the understanding that the proposed study would not violate any of the ethical guidelines discussed below.

Sections 89 of the rules of conduct explains that informed consent must be obtained from potential participants before the research begins. Research participants need to be made aware of the implications of the research protocol (Sheehan & McGee, 2013). For this reason, students completed an informed consent form online (see Appendix A) before they were allowed to participate in the study. The informed consent form was prepared in accordance with the criteria specified in the Health Professions Council of South Africa's ethical rules of conduct for practitioners (HPCSA, 2011):

- The researcher had a clear agreement with every participant prior to administering the BDI–II.
- The researcher ensured that the consent form was in a language understood by the participants.
- The informed consent was of a comprehensive and voluntary nature, contained information about the nature of the research and participants' freedom to decline/participate/withdraw, explained consequences and risks of participating, protected participants from adverse consequences of withdrawing/declining, and would not offer excessive financial or other inducements to obtain participation.

- Confidentiality of participants will be explained to the participants in detail and adhered to by the researcher at all times during the research process.

All of the above information was included in the participant consent form. In addition to this, the researcher's contact details were provided on the consent form to ensure that any questions from participants regarding the research could be answered by the researcher directly, as set out in section 94 of the rules of conduct specifically pertaining to psychology (HPCSA, 2004).

Section 24 of the rules of conduct emphasises privacy and confidentiality. It states that the underlying principle of this section is that confidentiality and privacy of research participants is maintained as far as possible (HPCSA, 2004). This concern was addressed by allocating a number to each participant once he or she had completed the questionnaire. By doing so, no information provided by participants could be linked to a specific participant and so anonymity was maintained.

Finally, it should be noted that no deception was implemented when obtaining participants for this study. Section 93 of the rules of conduct prohibits the use of deception, unless the potential scientific value of the study overshadows the possible negative effect of deceiving participants (HPCSA, 2004). There was no need to deceive participants in the present study; thus, the true nature of the research was explained to participants, and any questions raised concerning the research study were answered openly and honestly.

During the study, the researcher kept all the material in electronic format on a password-protected computer to which only the researcher had access. Thereafter, all material would be held in safe storage by the University of Pretoria for the required fifteen years for research purposes.

3.9 Summary

Chapter 3 provided a description of the research methodology that was employed to answer the research question. The researcher discussed the research and theoretical underpinnings of the research methodology. A survey research design was utilised where the researcher contacted students to participate in the survey by advertising the study on their "Click-UP" systems. A final sample size of 134 participants consisted of predominantly white females. It is recognised that the demographic distribution of participants in this study

is not characteristic of the broader South African population; however, it has already been noted that the external validity of this study is low and should be interpreted with caution.

In essence, this study sought to investigate the awareness and help-seeking behaviour in the first-year psychology student population at the University of Pretoria, in which it was possible to implement the research design. The measurement instrument used was the Beck Depression Inventory II (BDI–II), which was included in the online questionnaire to screen for depressive symptoms in the respondents. The reliability and validity of the measurement instrument and research design were discussed. Participants were informed of the true nature of the study and were required to consent to participation before data collection began. The analysis of the results of the study is discussed in Chapter 4.

Chapter 4: Analysis of Results

4.1 Introduction

The results are discussed using four topical sections relating to the questionnaire used in the study (see Appendix A). The first section will provide a comprehensive analysis of the results of the Beck Depression Inventory – II (BDI–II). The BDI–II formed Section 2 of the questionnaire and as such, all items of Section 2 of the questionnaire were utilised in the analysis. The next section investigated the opinion of students regarding their transition to university. The third section of the results chapter deals with the opinions of students relating to their subjective awareness of depression and their personal opinions thereof. The final section of the questionnaire explored the help-seeking behaviour of students with regard to depression.

The primary reason for presenting the results thematically, and not sequentially as they appear on the questionnaire, is to ensure a conceptually logical flow. It should be noted that the questionnaire was not laid out in the manner discussed below, as it would likely have resulted in leading participants to provide socially desirable answers.

4.2 Statistical Analysis of the BDI–II Results

The BDI–II, as discussed in section 3.6.2 of Chapter 3, is a 21-item scale designed to determine the extent of depressive symptoms experienced by the participants for a two-week period prior to completing the questionnaire. The reliability rating of the scale when calculated for this study was $\alpha = 0.934$. The aim with the statistical analysis was to determine the extent of depressive symptoms exhibited by the sample in the past two weeks. Note that the total BDI–II score (a score out of 63) was used in all analyses.

All items of the BDI–II are closed-ended questions and required the students to indicate which of the statements provided in each item best suit their state of well-being over the past two weeks. The BDI–II formed Section B (questions 12 to 32) of the questionnaire (see Appendix A). Table 4.1 displays the descriptive statistics of the scale.

Table 4.1

Descriptive Statistics of the Participants' BDI–II Scores

	Descriptive statistics	Statistic	Std. Error
BDI–II	N	134	
	Mean	17.12	1.047
	5% Trimmed Mean	16.43	
	Median	15.00	
	Variance	146.873	
	Std. Deviation	12.119	
	Minimum	0	
	Maximum	53	
	Range	53	
	Inter-quartile Range	18	
	Skewness	.747	.209
	Kurtosis	-.068	.416

Table 4.2

BDI–II Tests for Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
BDI–II	.098	134	.003	.942	134	.000

[a] Lilliefors significance correction

Descriptive statistics of the BDI–II displayed in Table 4.2 above revealed that the mean was 17.12 and SD = 12.119. The results of the *Kolmogorov-Smirnov* test and *Shapiro-Wilk* test indicated that the data were not normally distributed (p = 0.003). However, as the sample size, consisting of 134 participants, was relatively large, it can be assumed that normality would not have a significant effect on the results, as the sampling distribution of the mean was normal (Mordkoff, 2016).

The BDI–II ranks respondents in four score ranges. A score of 0 to 13 is considered minimal depressive symptoms, 14 to 19 is mild, 20 to 28 is moderate, and 29 to 63 is

considered severe depressive symptoms (Beck et al., 1996b). It should be noted that the researcher did not use these score ranges in the statistical analysis, as the researcher would be able to analyse these scores only non-parametrically due to their ordinal nature. Instead, the researcher decided to use the continuous scores (0 to 63) to make use of parametric analysis methods.

Table 4.3

Frequency Distribution of BDI–II Score Ranges

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	0 – 13 (minimal)	62	46.3	46.3	46.3
	14 – 19 (mild)	23	17.2	17.2	63.4
	20 – 28 (moderate)	22	16.4	16.4	79.9
	29 – 63 (severe)	27	20.1	20.1	100.0
	Total	134	100.0	100.0	

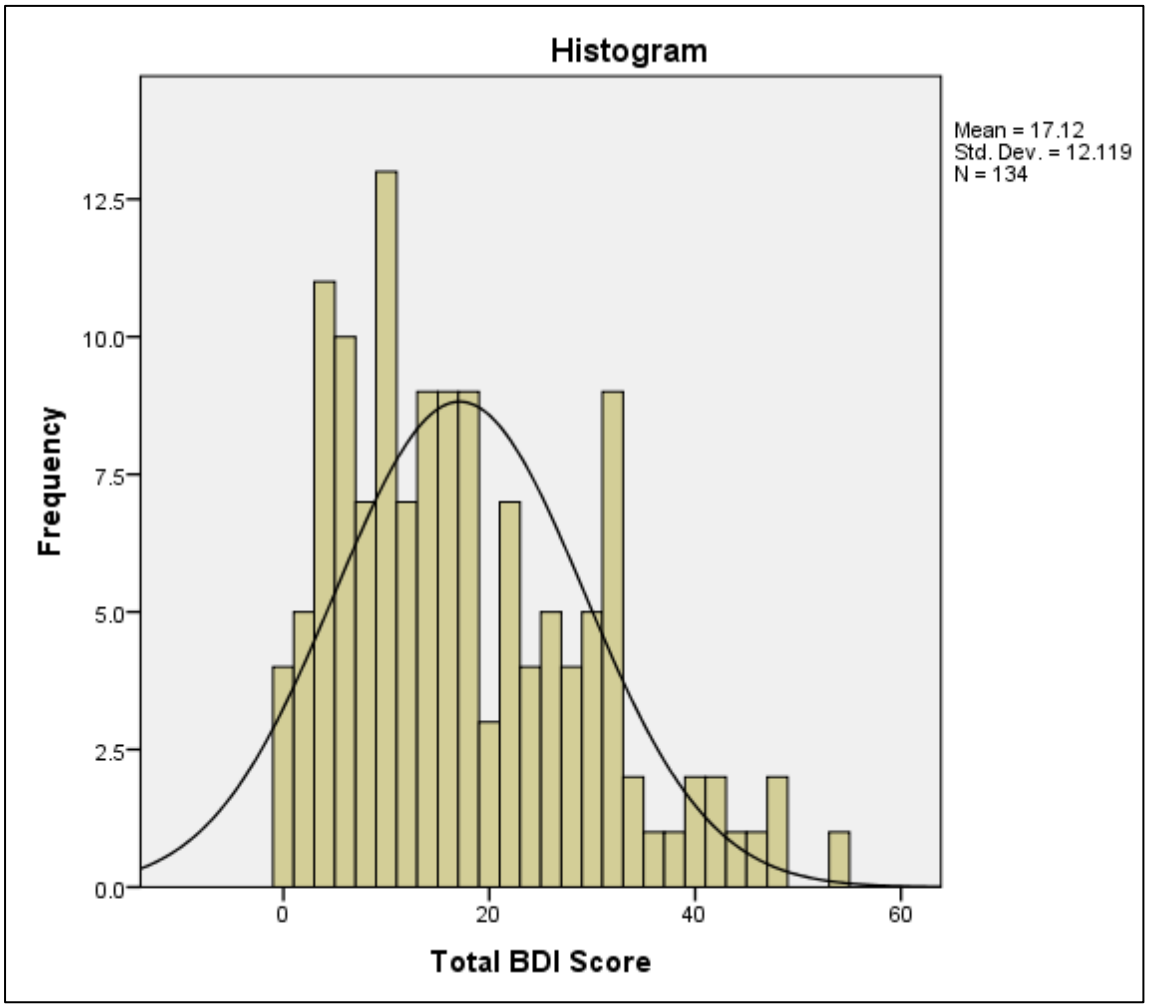

Figure 4.1. Frequency histogram of the BDI–II scores of the sample.

From this frequency histogram, we can see that results were positively skewed with the bulk of the participants scoring just below 20 out of a total score of 63 for depressive symptoms on the BDI–II Inventory. Although these results are not normally distributed, it is common for data from depression inventories to be skewed positively (Pallant, 2010).

4.2.1 Comparison of BDI–II scores between gender, age, race, faculty, and personal history of depression. ANOVAs and t-tests were conducted to determine whether there was a statistically significant difference between gender, age, race, faculty enrolment, personal history of depression, and total BDI–II scores of participants (see Appendix A). T-tests were used to determine the mean score of a dependent interval variable for two independent groups, such as male and female (Pallant, 2010), whereas ANOVAs were used to compare differences of means between more than two independent groups such as age (Pallant, 2010).

4.2.2.1 Independent sample t-test to compare means of BDI–II total scores between genders. An independent sample t-test was used, as the researcher was interested in comparing the scores of two different, independent groups of people (males and females) (Pallant, 2010). The results are shown in tables 4.4 and 4.5 below.

Table 4.4

Gender Distribution Regarding BDI–II Scores

Group Statistics					
Gender:		N	Mean	Std. Deviation	Std. Error Mean
Total BDI Score	Males	21	17.86	9.45	2.06
	Females	113	16.98	12.58	1.18

Table 4.5

Independent Samples t-test of BDI–II Scores

Independent Samples t-test										
		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Total BDI Score	Equal variances assumed	2.31	0.13	-0.30	132	0.76	-0.88	2.89	-6.59	4.84
	Equal variances not assumed			-0.37	34.68	0.72	-0.88	2.38	-5.70	3.95

The t-test analysis yielded no significant difference in scores between males (M = 17.86, SD = 9.45) and females (M = 16.98, SD = 9.45, t (132) = 0.30, p = 0.76 two-tailed).

4.2.2.2 Analysis of BDI–II total scores between ages. It should be noted that there was no benefit in running a one-way between-groups ANOVA to identify differences in age because age ranges for participants were too small for any significant analysis to be conducted, as most of the participants fell between the ages of 18 and 21, with only three participants (2.2%) stating that their age was over 21 years old and no participants stating that

their age was below 18 years old. The mean BDI–II scores for each age group are provided in the table below to offer some insight into how the different age groups scored on the BDI–II.

Table 4.6

Age Distribution Regarding BDI–II Scores

Age	N	Mean	Std. Deviation	Std. Error of Mean
18	25	16.00	10.03	2.01
19	78	17.87	12.69	1.44
20	18	10.94	9.32	2.20
21	10	27.60	11.29	3.57
22+	3	9.00	4.36	2.52
Total	134	17.12	12.12	1.05

4.2.2.3 Independent sample t-test to compare means of BDI–II total scores between races. Owing to the demographic distribution of the participants in the study, a comparison could not be made between all racial groups, as a very small number of the participants fell into the Asian (n = 0), Coloured (n = 2), Indian (n = 3) and "Other" (n = 2) racial groups. Consequently, only the means between the Black and White racial groups could be compared. An Independent sample t-test was used for this analysis, as the researcher was interested in comparing the scores of two different, independent groups of people (black and white students) (Pallant, 2010). The results of the t-test are given in the table below.

Table 4.7

Racial Distribution Regarding BDI–II Scores

	Race	N	Mean	Std. Deviation	Std. Error Mean
Total BDI Score	Black	28	14.93	11.27	2.13
	White	99	17.46	12.50	1.26

Table 4.8

Independent Samples t-Test to Determine Mean Scores of Racial Groups Regarding BDI–II Scores

		t-test for Equality of Means								
		Levene's Test for Equality of Variances							95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Total BDI Score	Equal variances assumed	0.365	0.547	-0.967	125	0.335	-2.536	2.622	-7.725	2.653
	Equal variances not assumed			-1.025	47.475	0.310	-2.536	2.474	-7.511	2.439

The t-test analysis provided no significant difference in scores of black students (M = 14.93, SD = 11.27) and white students (M = 17.46, SD = 12.5, t (125) = 0.967, p = 0.335 two-tailed).

4.2.2.4 One-way between-groups ANOVA to compare means of BDI–II total scores between faculties of study. The researcher aimed to identify any differences in BDI–II scores in terms of the faculties in which students were enrolled. Similar to the analysis of BDI–II scores according to race, not all faculty groups could be analysed due to the limited number of participants who were enrolled in that faculty. The most common faculty in which participants were enrolled was the Faculty of Humanities (n = 74), which was to be expected, as the Department of Psychology falls under the Faculty of Humanities. The second most common faculty in which participants were enrolled was the Faculty of Natural and Agricultural Science (n = 25). Faculties in which none of the participants was enrolled were the faculties of Economic and Management Sciences, Theology, Veterinary Science, and the Gordon Institute of Business Science (GIBS). Owing to the small number of participants who were enrolled in the faculties of Education, Engineering, Health Sciences, and Law, these faculties were grouped together in the group "Other" for analysis purposes. One-way ANOVAs were used to compare the mean scores of more than two groups. The F-test, which forms part of the ANOVA, tests the mean differences between groups simultaneously and allows one to determine whether there are statistically significant differences between groups. This type of analysis was conducted to establish first whether there were significant differences between participants' mean BDI–II scores and their faculties of study.

Table 4.9

Faculty Distribution Regarding BDI–II Scores

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Mini-mum	Maxi-mum
					Lower Bound	Upper Bound		
Other	28	15.464	10.207	1.929	11.506	19.422	2.000	34.000
Humanities	74	17.270	12.719	1.479	14.324	20.217	0.000	53.000
Natural and Agricultural Sciences	25	17.440	13.229	2.646	11.979	22.901	0.000	48.000
Total	127	16.906	12.246	1.087	14.755	19.056	0.000	53.000

Table 4.10

ANOVA Results of Faculty Distribution Regarding BDI–II Scores

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	75.147	2	37.574	0.248	0.781
Within Groups	18821.719	124	151.788		
Total	18896.866	126			

Table 4.10 indicates no significant differences in BDI–II scores between participants registered in different faculties (Humanities, Natural and Agricultural Sciences and "Other"). As there was no significant difference, there was no need to run post hoc tests of the ANOVA.

4.2.2.5 Considering the effect of a previous history of depression on participants' BDI–II scores. An independent sample t-test was used for this analysis, as the researcher was interested in comparing the scores of two different, independent groups of people (participants who identified that they had a history of depression and those who did not identify a history of depression) (Pallant, 2010). The results are given in the table below.

Table 4.11

Subjective Views Regarding Participants' History of Depression

Do you have any personal history of depression?		N	Mean	Std. Deviation	Std. Error Mean
Total BDI Score	No	76	11.95	9.24	1.06
	Yes	58	23.90	12.17	1.60

Table 4.12

Independent Sample t-test Results Regarding Participants Subjective Views on their History of Depression

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Total BDI Score	Equal variances assumed	6.75	0.01	-6.46	132.00	0.00	-11.95	1.85	-15.61	-8.29
	Equal variances not assumed			-6.23	103.05	0.00	-11.95	1.92	-15.75	-8.15

Table 4.12 above shows that the significant value for Levene's test was 0.01, which shows that equal variance is not assumed for this t-test (Pallant, 2010). The t-test analysis provided a significant difference between scores of students with a history of depression (M = 23.90, SD = 12.17) and students without any history of depression (M = 11.95, SD = 9.24, t = (103.05) = -6.23, p < .005 two-tailed). Cohen's D was calculated at 1.106, which is considered a large effect size (Cohen, 1988).

4.2.2.6 Question 33: Has completing this questionnaire affected you in any way? This closed-ended question (see Appendix A) required participants to answer a "yes" or "no" question that asked whether they had been affected by completing the questionnaire. This question was not asked at the end of the questionnaire but instead was asked directly after participants had completed the BDI–II assessment so that the researcher could gain understanding of how participants experienced the BDI–II assessment, to gauge the value of such an assessment for first-year students. The results of the participants are given in the table below.

Table 4.13

Frequency Distribution of the Effect the Questionnaire had on Participants

Has completing this questionnaire affected you in any way?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	93	69.4	69.4	69.4
	Yes	41	30.6	30.6	100.0
	Total	134	100.0	100.0	

Table 4.13 shows that 30.6% (n = 41) of participants stated that they had been affected by the questionnaire. The next question (Question 34; see Appendix A) in the questionnaire, was an open-ended question that expanded on the responses to Question 33 by asking the participants who stated that they had been affected by completing the questionnaire to explain the effect that the questionnaire had had on them. As this question was asked directly after the BDI–II assessment section of the questionnaire and before any other questions that focussed on depression or participants' experiences when making the transition to university, this question focused specifically on the effect that completing the BDI–II section of the questionnaire had on participants.

Of the 41 participants who stated in Question 33 that they had been affected by the questionnaire, 40 participants provided an explanation in response to Question 34 of how the questionnaire had affected them. The researcher then reviewed the open-ended responses so that a thematic analysis could be used to interpret the number of responses that could be considered a "cue to action", as stated in the Health Belief Model (HBM). The HBM considers a cue to action as instances that serve as a reminder to the individual of the severity or threat of the disorder, in this case depression (Henshaw & Freedman-Doan, 2009). The analysis of these "cues to action" is given in Table 4.14 below.

Table 4.14

Coding Scheme for Thematic Analysis of the Effect the Questionnaire had on Participants

Code – Cue to action	
Criteria:	This category refers to all comments made by the participants who stated that the questionnaire had made them more aware of the severity and threat of depression as an illness.
Statements identified by the researcher that reflect the effect of the questionnaire on participants' awareness:	• Aware • Realise • Question • Think • Helped • Perspective • Reflect • Introspection • Affirm • Taught
Examples of responses added to this category	• It has made me aware of where I have changed and what I should be careful of in terms of bad thoughts. • It has made me more aware about the symptoms of depression. • Taught me how to allow myself to be honest with myself. • It has made me aware of certain factors of my emotional well-being that I was not consciously considering as influential factors. • It made me realise that I'm really not coping.

Of the 40 participants who answered Question 34, the researcher considered 33 (82.5%) responses cues to action, based on the definition provided by the HBM. This shows that a significant number of participants who mentioned that they had been affected by the questionnaire stated that the effect was beneficial and insightful. One comment stated that the questionnaire had a negative effect: "*It made me feel bad about life by focusing merely on the negative; there were no positive questions asked."* Although this was the only comment mentioning a negative effect of the questionnaire, this comment should be considered for future research.

4.3 Results Regarding Participants' Transition to University

This subsection investigated how students experienced their transition to university life. Questions 35, 36, 37, 38, and 39 were used for analysis in this section (see Appendix A). This section aimed to produce results with regard to the following questions:

- How did students experience their transition to university life?
- Students' emotional well-being before and after making the transition to university and a comparison thereof.
- Analysis of factors that made it difficult to make the transition to university life.

4.3.1 Question 35: How did students experience the transition to university life?

This closed-ended Likert scale question (see Appendix A) required participants to rate their experience of the transition to university life, on a scale from 1 (extremely easy) to 5 (extremely difficult).

Table 4.15

Frequency Distribution of how Participants Experienced their Transition to University Life

How did students experience the transition to university life?													
		Extremely easy		Easy		Moderate		Difficult		Very difficult			
	N	f	%	f	%	f	%	f	%	f	%	Mean	SD
Q35	134	6	4.5	29	21.6	51	38.1	34	25.4	14	10.4	3.16	1.03

A significant number of participants experienced the transition to university as moderate (38.1%). It can also be seen from the results above that a few more participants experienced their transition to university as difficult or extremely difficult (35.8%), compared to easy or extremely easy (26.1%).

4.3.2 Question 36: Participants' personal views regarding their emotional well-being before the transition to university.

This closed-ended Likert scale question (see Appendix A) required participants to rate their emotional well-being before entering university, on a scale from 1 (very poor) to five (very healthy).

Table 4.16

Frequency Distribution of Participants' Perceptions Regarding their Emotional Well-being before the Transition to University Life

How did students perceive their emotional well-being before the transition to university life?													
		Very poor		Poor		Reasonable		Healthy		Very healthy			
	N	f	%	f	%	f	%	f	%	f	%	Mean	SD
Q36	134	7	5.2	22	16.4	26	19.4	55	41.0	24	17.9	3.50	1.12

A significant number of participants (41%) believed that their emotional well-being was healthy before entering university. The next three response options had relatively similar percentages, with reasonable well-being being the second most common response at 19.4%, very healthy well-being a close third at 17.9%, and poor emotional well-being at 16.4%. Finally, only 5.2% of participants rated their emotional well-being as very poor before entering university.

4.3.3 Question 37: Participants' personal views regarding their emotional well-being since the transition to university. As in the previous question, this question required participants to rate their emotional well-being; however, this question focused on participants' emotional well-being since entering university. The question was a closed-ended Likert scale question (see Appendix A) ranging on a scale from 1 (very poor) to 5 (very healthy).

Table 4.17

Frequency Distribution of Participants' Perceptions Regarding their Emotional Well-being after the Transition to University Life

How did students perceive their emotional well-being since the transition to university life?													
		Very poor		Poor		Reasonable		Healthy		Very healthy			
	N	f	%	f	%	f	%	f	%	f	%	Mean	SD
Q37	134	8	6.0	34	25.4	48	35.8	29	21.6	15	11.2	3.07	1.08

A significant number of participants (35.8%) believed that their emotional well-being had been reasonable since the transition to university. The next most common response was that of poor emotional well-being (25.4%), followed by healthy well-being (21.6%) as the

third most common response. Very poor emotional well-being and very healthy emotional well-being were the least common responses at 8.0% and 11.2% respectively.

4.3.4 Paired sample t-test to compare means of participants' personal views regarding their well-being before and after the transition to university. The researcher used a paired sample t-test, as data were collected from the same group of participants for two different occasions (emotional well-being before and after entering university) (Pallant, 2010). The results are shown in the tables below:

Table 4.18

Descriptive Statistics of Emotional Well-being before and after Entering University

Paired Samples Statistics

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Emotional well-being before entering university?	3.50	134	1.122	.097
	Emotional well-being since entering university?	3.07	134	1.077	.093

Table 4.19

Paired Samples t-test regarding Emotional Well-being before and after the Transition to University

Paired Samples Test

		Paired Differences					t	Df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Emotional well-being before entering university? Emotional well-being since entering university?	.433	1.373	.119	.198	.668	3.648	133	.000

The t-test analysis indicated a significant decrease in participants' perceived emotional well-being from before (M = 3.50, SD = 1.12) to after (M = 3.07, SD = 1.08), t (133) = 3.65, p < .005 (two-tailed) the transition to university life. The mean decrease in perceived

emotional well-being was .43 with a 95% confidence interval ranging from 0.20 to 0.67. Cohen's D was calculated at 0.39, which is considered a small effect size (Cohen, 1988).

4.3.5 Question 38: Analysis of responses regarding the difficulties experienced by participants during the transition to university life. This closed-ended, multiple-response question (see Appendix A) required participants to indicate with which aspects they struggled when adjusting to university life. Students were permitted to select as many difficulties as they wished by selecting as many items as they believed were relevant to themselves. In this dichotomous question ("yes" or "no"), marking an item indicated that it was a difficulty with which the participant struggled during the transition to university, and not marking the item showed that the participant did not experience this difficulty during the transition to university life. Students' responses are indicated in the table below.

Table 4.20

Frequency Distribution of Difficulties Experienced by Participants during the Transition to University Life

Difficulties experienced during the transition to university life	Percentage of responses	Frequency	Percentage of cases
Financial constraints	12.4%	45	33.6%
Social stressors	12.1%	44	32.8%
Academic difficulties	16.5%	60	44.8%
Forming new social support systems	19.8%	72	53.7%
Adjusting to the culture of the university	12.6%	46	34.3%
Moving away from your support system	13.2%	48	35.8%
Adjusting to a new city	7.4%	27	20.1%
Other	4.1%	15	11.2%
None of the above	1.9%	7	5.2%
Total	100%	364	

Table 4.20 demonstrates that the most common difficulty experienced by participants was that of forming new social support systems (19.8%), with over half of the participants (53.7%) indicating that this was a difficulty they experienced. Academic difficulties were the second most common difficulty (16.5%), followed by moving away from your support system (13.2%), adjusting to the culture of the university (12.6%), financial constraints

(12.4%), and social stressors (12.1%). The least common responses were "adjusting to a new city", "other", and "none of the above" (7.4%, 4.1% and 1.9% respectively).

Responses from participants who selected "other" from Question 38 were captured, and then frequencies were determined using the find function in Microsoft Excel. Of the 15 participants who selected "other", 13 participants provided an explanation, all of which are given in Table 4.21 below.

Table 4.21

"Other" Responses to Difficulties Experienced during the Transition to University Life

Frequency	Percentage	Response
121	90.3%	• *Not answered*
2	1.5%	• *Time management*
1	.7%	• *Does not have funding for university yet and it is already August*
1	.7%	• *Draining hour drive to and from university every day, family issues making life at home/drives between home and university unpleasant.*
1	.7%	• *Health problems. And being bullied emotionally.*
1	.7%	• *I can't talk to people.*
1	.7%	• *Lack of structure similar to that of high school.*
1	.7%	• *Living alone.*
1	.7%	• *Needing to know what goes on in the world. I find it somewhat difficult to keep up with current events, seeing as we do not have DSTV.*
1	.7%	• *Not pursuing the degree that I wanted (and was accepted for at another university).*
1	.7%	• *Parents got divorced.*
1	.7%	• *Patriarchal residence situation.*
1	.7%	• *The increased pressure to do well.*

Time management was identified twice (n = 2; 1.5%) as an issue faced by students during the transition to university. All of the "other" responses were mentioned only once (n = 1; 0.7%). It should be noted that some issues raised in the "other' category could be

considered specific to that participant. Examples of these specific responses are the following:

- "*Needing to know what goes on in the world. I find it somewhat difficult to keep up with current events, seeing as we do not have DSTV.*"
- "*Not pursuing the degree that I wanted (and was accepted for at another university).*"
- "*Parents got divorced.*"

4.4 Results regarding Participants' Awareness of Depression

The next point of interest in this study was to determine the awareness level of students regarding various aspects of depression. This included analyses of the following:

- Students' awareness levels of depressive symptoms.
- Students' awareness levels regarding the severity of depression.
- Students' opinions of how susceptible they believed they were to depression.
- Students awareness levels of the organisations at the university (students support), as well as organisations outside of the university (FAMSA, SADAG) that assist students who are struggling with depression.
- Identifying students' subjective awareness of whether they were presenting with symptoms of depression at the time and how that related to their BDI–II scores.

4.4.1 Question 40: Students' awareness levels of depressive symptoms. This closed-ended question (see Appendix A) required participants to answer "yes" or "no" to a question that asked whether they were aware of what the symptoms of depression are. Table 4.22 provides the descriptive statistics for this question; as a categorical variable (yes/no) was used in question 40, only a frequency table was calculated from the descriptive statistics.

Table 4.22

Frequency Distribution regarding Participants' Awareness Levels of Depression

Are you aware what the symptoms of depression are?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	10	7.5	7.5	7.5
	Yes	124	92.5	92.5	100.0
	Total	134	100.0	100.0	

Table 4.22 indicates that a very large majority (92.5%) of the participants stated that they were aware what the symptoms of depression are, with only a handful of participants (7.5%) stating that they were not aware of the symptoms of depression. A possible reason why this figure is so high could be that all participants in this study were enrolled in the first-year psychology module at the time and consequently had been exposed to information regarding the symptoms of depression. However, later analysis showed that although the majority of students stated that they were aware of the symptoms of depression, many were unable to identify if they were struggling with depression at the time. An even more concerning fact was that very few were aware of support services on and off campus that were aimed at assisting students.

Table 4.23

Cross-tabulation of Faculties of Study and Awareness Levels of Depressive Symptoms

		Are you aware what the symptoms of depression are?				Total
		No	%	Yes	%	
Faculty of Study	Humanities	4	4.1%	75	94.9%	79
	Education	3	11.5%	23	88.5%	26
	Natural & Agric. Science	0	0%	5	100%	5
	Law	1	4.6%	17	94.4%	18
	Health Sciences	1	25%	3	75.0%	4
	Engineering	1	50%	1	50%	2
Total		10	7.5%	124	92.5%	134

4.4.2 Question 41: How severe do you think depression is as an illness? This closed-ended, Likert scale question (see Appendix A) required participants to rate their opinion regarding the severity of depression as an illness on a scale from 1 (not severe at all) to 5 (extremely severe).

Table 4.24

Participants' Subjective Opinions on the Severity of Depression as an Illness

How severe do you think depression is as an illness?													
		Not severe at all		Slightly severe		Moderately severe		Very severe		Extremely severe			
	N	f	%	f	%	f	%	f	%	f	%	Mean	SD
Q41	134	1	0.7	3	2.2	12	9.0	55	41.0	63	47.0	4.31	0.79

From the analysis of results for Question 41, it is evident that the vast majority of the participants in the sample were aware of the severity of depression as an illness, with 41% of participants rating the severity 4 out of 5 (very severe) and 47% of participants rating it with the highest severity of 5 (extremely severe).

4.4.3 Question 42: How susceptible do you believe you are to suffer from depression? This closed-ended, Likert scale question required participants to rate their perceived susceptibility to depression, on a scale from 1 (not susceptible at all) to 5 (extremely susceptible).

Table 4.25

Participants' Subjective Opinions of how Susceptible they Believed they were to suffer from Depression

How susceptible do you believe you are to suffer from depression?													
		Not susceptible at all		Slightly susceptible		Moderately susceptible		Very susceptible		Extremely susceptible			
	N	f	%	f	%	f	%	f	%	f	%	Mean	SD
Q42	134	22	16.4	39	29.1	32	23.9	25	18.7	16	11.9	2.81	1.26

The results in Table 4.25 show that there was quite an even distribution of opinions regarding participants' susceptibility to depression as an illness. The most common response was that of slight susceptibility of participants at 29.1% and the least common response was that of extreme susceptibility of participants at 11.9%.

4.4.4 Question 58: Are you aware that there are free and confidential services for students on campus (student support)? This closed-ended question (see Appendix A) required participants to answer "yes" or "no" to a question that asked whether they were aware of the free and confidential services for students on campus (student support). Table 4.26 provides the descriptive statistics for this question; as a categorical variable (yes/no) was used in question 58, only a frequency table was calculated from the descriptive statistics.

Table 4.26

Frequency Distribution in Response to Question 58

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	55	41.0	41.0	41.0
	Yes	79	59.0	59.0	100.0
	Total	134	100.0	100.0	

From the results above, it is evident that almost half of the participants (41%) were not aware of the confidential student support services that were available to them on campus.

4.4.5 Question 59: Are you aware of the organisations FAMSA and the South African Depression and Anxiety Group (SADAG) that operate separately from the university, who offer support to individuals suffering from depression? This closed-ended question (see Appendix A) required participants to answer "yes" or "no" to a question that asked whether they were aware of organisations such as FAMSA and SADAG that operate separately from the university and offer support to individuals suffering from depression. Table 4.27 provides the descriptive statistics for this question; as a categorical variable (yes/no) was used in question 59, only a frequency table was calculated from the descriptive statistics.

Table 4.27

Frequency Distribution Response to Question 59

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	95	70.9	70.9	70.0
	Yes	39	29.1	29.1	100.0
	Total	134	100.0	100.0	

The results above indicate that over two thirds of the participants (70.9%) were not aware of organisations outside of the university, such as FAMSA and SADAG, which can assist them with depression and other psychological difficulties.

4.4.6 Question 46: Do you think that you are currently suffering from depression?

With this question, the researcher aimed to find out how aware students were of their own depression. In order to do so the participants' results for Question 46 were compared with participants' results for the BDI–II assessment, with the use of a one-way, between-groups ANOVA. This allowed a comparison between participants' personal opinions on depression, as well as their personal opinions concerning their current state of mind, and whether they believed they were presenting with depressive symptoms.

Table 4.28

Descriptive Statistics Regarding Participants who Believe they are currently Suffering from Depression

Descriptives

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Yes	30	29.20	12.021	2.195	24.71	33.69	6	53
No	70	10.06	7.050	.843	8.38	11.74	0	30
Maybe / not sure	34	21.00	10.346	1.774	17.39	24.61	2	48
Total	134	17.12	12.119	1.047	15.05	19.19	0	53

Table 4.29

Test of Homogeneity of Variance Regarding Participants who Believe they are Currently Suffering from Depression

Total BDI Score			
Levene Statistic	df1	df2	Sig.
3.945	2	131	.022

Table 4.30

Robust Test of Equality of Means Regarding Participants who Believe they are Currently Suffering from Depression

Total BDI Score				
	Statistic[a]	df1	df2	Sig.
Welch	42.179	2	53.646	.000
Brown-Forsythe	38.844	2	73.288	.000

[a] Asymptotically F distributed.

The results in the tables above show that for this ANOVA, the analysis violated the assumption of homogeneity of variance, which made the Welch F-test necessary to determine whether the ANOVA results were valid (Pallant, 2010). The results of the Welch F-test were $F_{(2,53.65)} = 42.179$, $p \leq 0.01$, which indicated that there was a significant difference between BDI–II scores and participants' beliefs about whether they were suffering from depression. Consequently, *post hoc* comparisons using the Tukey HSD test were conducted to determine where these differences had occurred (Randolph & Myers, 2013). The results are reported in Table 4.31.

Table 4.31

Post hoc Analysis Regarding Participants who Believe they are Currently Suffering from Depression

Post-hoc Multiple Comparisons between Groups

Dependent Variable: Total BDI Score

(I) Do you think that you are currently suffering from depression?	(J) Do you think that you are currently suffering from depression?	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Maybe/Not sure	No	10.943*	1.929	.000	6.167	15.718
	Yes	-8.200*	2.311	.002	-13.923	-2.477
No	Maybe/Not sure	-10.943*	1.929	.000	-15.718	-6.167
	Yes	-19.143*	2.013	.000	-24.128	-14.158
Yes	Maybe/Not sure	8.200*	2.311	.002	2.477	13.923
	No	19.143*	2.013	.000	14.158	24.128

*. The mean difference is significant at the 0.05 level.

There were significant differences between all three options to Question 36: Yes (*M* = 29.20, *SD* = 12.021); No (*M* = 10.06, *SD* = 7.05); and Maybe/Not sure (*M* = 21.00, *SD* = 10.346). The effect size was calculated using eta-squared and provided a value of 0.429, which according to Cohen (1988) is considered a large effect size.

4.5 Results Regarding Help-seeking Behaviour of Participants

The final section of the results focused on analysing questions that revolved around help-seeking behaviour of participants. This section provides insight into the following:

- How many of the participants who stated they had a personal history of depression sought treatment for their depression?
- Analysis of participants' perceptions regarding the effectiveness of different types of treatment for depressive symptoms (questions 48 to 55).
- Analysis of participants' perceptions regarding the barriers to receiving treatment.
- Do participants believe a stigma is attached to seeking help for depression?

- Do participants believe there is value in seeking treatment from counselling services for depression?

The questions included in this section are questions 43, 44, 48, 49, 50, 51, 52, 53, 54, 55, 56, 60, and 62.

4.5.1 Questions 43 and 44: How many participants who stated that they had a personal history of depression sought treatment for their depression? To analyse this question, the researcher compiled a cross-tabulation to identify the number of students with a previous history of depression who had sought treatment for their depression. This required the researcher to identify the responses of the 58 participants who had indicated in Question 43 that they had a previous history of depression to Question 44, which asked participants to state whether they had ever sought treatment for their depression. The results are indicated in Table 4.32 below.

Table 4.32

Cross-tabulation of Questions 43 and 44

			Do you have any personal history of depression?		
			No	Yes	Total
Have you ever received any form of treatment for depression?	No	Count	76	21	97
		% within Do you have any personal history of depression?	100.0%	36.2%	72.4%
	Yes	Count	0	37	37
		% within Do you have any personal history of depression?	0.0%	63.8%	27.6%
Total		Count	76	58	134
		% within Do you have any personal history of depression?	100.0%	100.0%	100.0%

Table 4.33

Chi-Square Test for Questions 43 and 44

	Value	df	Asymptotic Significance (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	66.976[a]	1	.000		
Continuity Correction[b]	63.823	1	.000		
Likelihood Ratio	81.986	1	.000		
Fisher's Exact Test				.000	.000
N of Valid Cases	134				

[a] 0 cells (0.0%) have expected a count of less than 5. The minimum expected count is 16.01.

[b] Computed only for a 2 x 2 table.

Table 4.34

Symmetric Measures for Questions 43 and 44

		Value	Approx. Sig.
Nominal by Nominal	Phi	.707	.000
	Cramer's V	.707	.000
N of Valid Cases		134	

[a] Not assuming the null hypothesis.

[b] Using the asymptotic standard error assuming the null hypothesis.

As shown in the cross-tabulation above, of the 58 participants who stated they had a previous history of depression, 63.8% (n = 37) had sought treatment for their depression, while 36.2% (n = 21) had not. The Chi-test for independence (with the Yates Continuity Correction) indicated that there was a significant association between participants who had a personal history of depression and those who had sought treatment for depression χ^2 (1, n = 134) = 63.82, p < .005, phi = .707. The phi coefficient value (.707) is greater than .50; therefore, it can be considered a large effect size (Pallant, 2010).

4.5 2 Questions 48 to 55: Effectiveness of different forms of treatment. The following questions (questions 48 to 55; see Appendix A) were closed-ended, Likert scale questions that required participants to rate different types of treatment methods for

depression, on a scale from 1 (not effective at all) to 5 (extremely effective). The results to these questions are given in the table and figure below.

Table 4.35

Participants' Perceptions of the Effectiveness of Various Forms of Treatment for Depression

Statistical Results for Questions 48 to 55														
Item – How effective do you feel _____ will be in the treatment of depression?			**Not effective at all**		**Slightly effective**		**Moderately effective**		**Very effective**		**Extremely effective**			
		N	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**Mean**	**SD**
Q48	Student support services available on campus	134	15	11.2	28	20.9	50	37.3	28	20.9	13	9.7	2.97	1.124
Q49	Utilising organisations such as FAMSA and SADAG	134	7	5.2	18	13.4	50	37.3	47	35.1	12	9.0	3.29	0.987
Q50	Online counselling services	134	37	27.6	39	29.1	36	26.9	12	9.0	10	7.5	2.40	1.195
Q51	Talking about your difficulties with someone in an unprofessional manor – family, friends, pastor/priest, etc.	134	21	15.7	27	20.1	49	36.6	30	22.4	7.0	5.2	2.81	1.112
Q52	Medication/pharma-ceuticals	134	8	6.0	10	7.5	42	31.3	50	37.3	24	17.9	3.54	1.060
Q53	Reward/relief activities – watching TV, gaming, reading, drinking, smoking, social media, etc.	134	41	30.6	30	22.4	42	31.3	18	13.4	3	2.2	2.34	1.118
Q54	Religion/spirituality	134	23	17.2	23	17.2	27	20.1	32	23.9	29	21.6	3.16	1.397
Q55	Exercise and a healthy diet	134.0	0	0.0	13	9.7	40.0	29.9	50	37.3	31	23.1	3.74	0.925

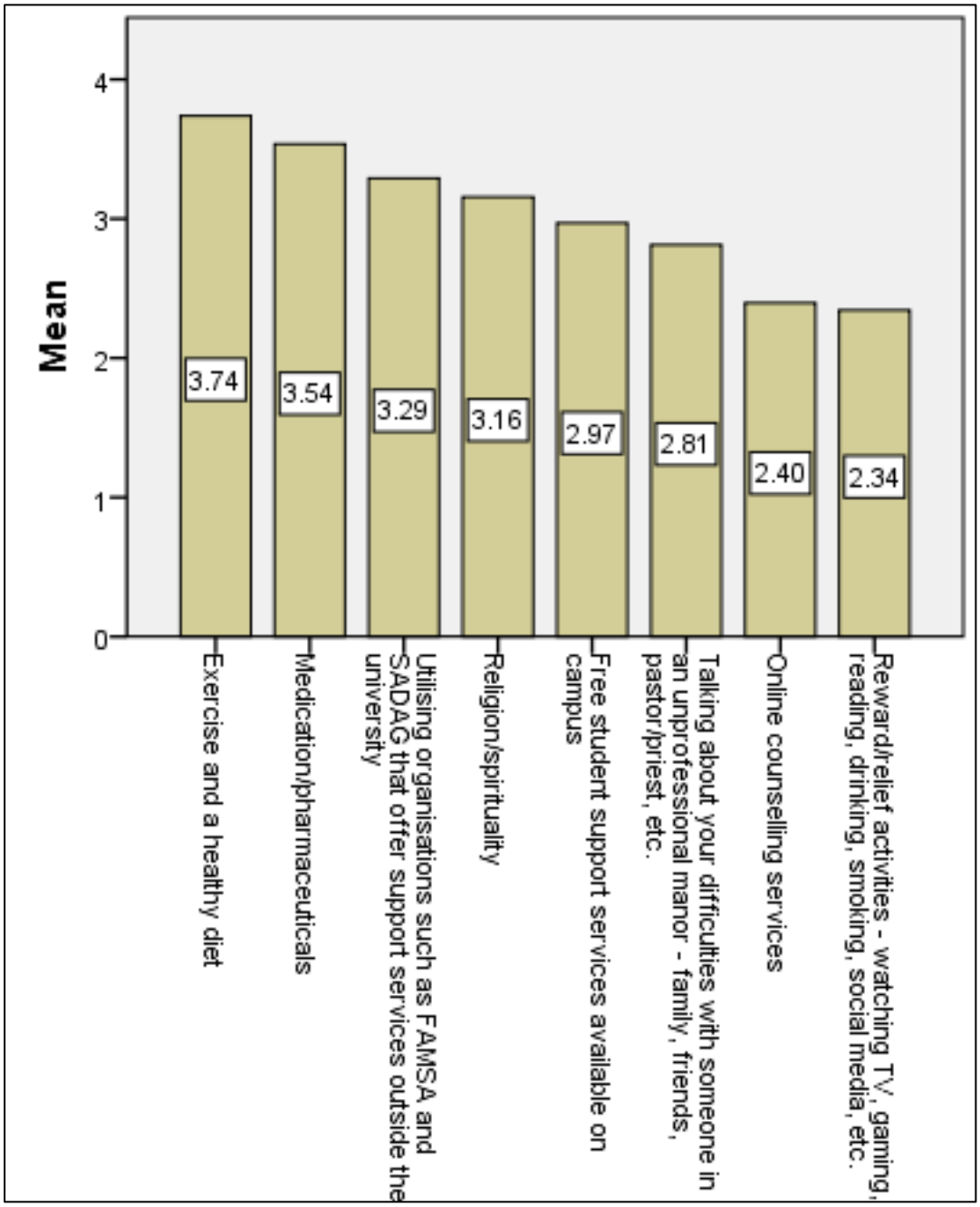

Figure 4.2. Mean differences in participants' perceptions regarding the effectiveness of various treatment methods for depression.

The researcher constructed a Pareto chart (found above in Figure 4.2) from the mean scores for questions 48 to 55. This chart indicates the perceived importance participants attached to various treatment methods for depression. From Table 4.35 and Figure 4.2, it is evident from comparing the means of the various forms of treatment that students believe that exercise and a healthy diet would be the most beneficial form of treatment (mean = 3.72), followed closely by medication and pharmaceuticals (mean = 3.54). Participants also

believed that that there would be value in utilising organisations such as FAMSA and SADAG that offered services to assist with depression (mean = 3.29). Interestingly, participants believed that utilising organisations outside the university would be more beneficial than making use of the free student support services available on campus (mean = 2.97). The least common responses were those of reward/relief activities (mean = 2.34) and online counselling services (mean = 2.40).

4.5.3 Question 56: What barriers could stop you from seeking treatment for depression, if you had to present with depressive symptoms? This closed-ended, multiple response question (see Appendix A) required participants to indicate which barriers would hinder them from seeking help, if they had to present with depressive symptoms. Students were permitted to select as many barriers as they wished. The participants' responses are indicated in Table 4.36.

Table 4.36

Barriers Preventing Students from Seeking Treatment for Depressive Symptoms

Barriers preventing students from seeking treatment if they exhibited depressive symptoms	Percentage of responses	Frequency	Percentage of cases
Lack of time	20.2%	66	49.3%
Financial constraints	19.3%	63	47.0%
Fear of stigmatisation	16.3%	53	39.6%
Treatment is not easily accessible	7.1%	23	17.2%
Lack of knowledge about where to seek treatment	13.5%	44	32.8%
Previous negative experiences regarding treatment	8.3%	27	20.1%
Belief that depression is not a serious illness	5.8%	19	14.2%
Other	3.7%	12	9.0%
None of the above	5.8%	19	14.2%
Total	100%	326	

According to Table 4.36, the most prominent barrier that would hinder participants to seek help was lack of time (20.2%). This was followed by financial constraints (19.3%), fear of stigmatisation (16.3%) and lack of knowledge about where to seek treatment (13.5%). The

least common barriers were “None of the above”, which purports that students believed they faced no barriers that would hinder them from seeking treatment.

Similar to the way in which Question 38 was analysed, responses from participants that selected “Other” in Question 56 were captured, and then frequencies were determined using the find function in Microsoft Excel. The data were then imported into SPSS to create a frequency table. Of the 15 participants who selected “other”, 13 participants provided an explanation. The results are presented in Table 4.37.

Table 4.37

“Other” Responses Grouped into Potential Barriers that Prevented Participants from Seeking Treatment

“Other” responses	**Frequency**	**Percent**	**Valid Percent**	**Cumulative Percent**
Not answered	124	92.5	92.5	92.5
Belief that treatment will not be helpful for depression	2	1.5	1.5	94.0
Difficulty opening up about depression (words included: opening up, talking, and speaking out)	4	3.0	3.0	97.0
Fear of speaking to their family about their depression	2	1.5	1.5	98.5
Staff is too busy to help those who are struggling	1	.7	.7	99.3
Too scared	1	.7	.7	100.0
Total	134	100.0	100.0	

Table 4.38

Exact "Other" Responses Provided by Participants Regarding Barriers that Hinder Seeking Treatment for Depression

"Other" response categories	**Exact responses from participants**
Belief that treatment will not be helpful for depression	• Just don't think it will ever been a full-time fix. • If severely depressed I may feel that there is no point in seeking help – this would prevent me from seeking treatment.
Difficulty opening up about depression	• It's hard for me to open up to anyone. • Hard to physically speak out. • Talking about one's depression is depressing. • The fact that I would have to own up to the fact that I have depression and I am not the type of person to open up to someone, letting them every part of my life.
Fear of speaking to their family about their depression	• My family doesn't view depression as a 'real' disorder, but rather me being dramatic. Further, they would just tell me to pray it away. While I do find prayer to be effective, I feel like I would need a conjunction of prayer and another treatment form to stop feeling so emotionally numb. I don't care about anything anymore. I can't even pray. • Having to discuss it with family.
Staff is too busy to help those who are struggling with depression	• Psychologists and doctors too fully booked to help you out.
Too scared	• Too scared. I'm not quite sure what to expect from treatment even though I think it might be helpful for minor issues.

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4.5.4 Question 60: Do you think that there is stigmatisation attached to students who make use of facilities or organisations that assist in helping individuals struggling with depression? This closed-ended question (see Appendix A) required participants to answer "yes" or "no" to a question about whether or not they believed stigmatisation was attached to students who make use of facilities or organisations, such as Student Support, FAMSA, and SADAG, as a way to seek help for depressive symptoms. Table 4.39 provides the descriptive statistics for this question, and as a categorical variable (yes/no) was used in question 60, only a frequency table was calculated from the descriptive statistics.

Table 4.39

Participants' Perceptions of whether Stigma is Associated with Individuals that make Use of Treatment Facilities for Depression

Do you think there any stigma is attached to students who make use of these types of facilities to assist with their depression?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	72	53.7	53.7	53.7
	Yes	62	46.3	46.3	100.0
	Total	134	100.0	100.0	

Table 4.39 illustrates that nearly half of the participants (46.3%, n = 62) believed that there was stigmatisation towards the use of facilities and organisations that assisted students in treating their depressive symptoms. This is a worrying statistic, especially if it is compared with Table 4.36, which shows that 39.6% (n = 53) of participants stated that fear of stigmatisation was a barrier that might prevent them from seeking treatment for depressive symptoms. Fear of stigmatisation was rated the third most common barrier, at 16.3%, after lack of time (20.2%) and financial constraints (19.3%) that would hinder participants from seeking treatment.

4.5.5 Question 62: Do you think there is value in seeking help from counselling services for depression? This closed-ended question (see Appendix A) required participants to answer "yes" or "no" to a question about whether or not they believed there was value in seeking treatment for depressive symptoms from counselling services. Table 4.40 provides the descriptive statistics for this question, and as a categorical variable (yes/no) was used in Question 62, only a frequency table was calculated from the descriptive statistics.

Table 4.40

Frequency Distribution Regarding Participants Perceptions of the Effectiveness of Seeking Support from Counselling Services for Depression.

Do you believe that it is worth seeking support from a counselling service for depression?					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	9	6.7	6.7	6.7
	Yes	125	93.3	93.3	100.0
	Total	134	100.0	100.0	

Table 4.40 above illustrates that a large majority of participants (93.3%, n = 125) believe that there is value in seeking support from counselling services for depression. A possible explanation for this high percentage could be that majority of students in this sample were aiming to become psychologists one day and therefore explains why such a high majority of participants believed there is value in seeking the help of a counselling service, which is often where a psychologist works.

4.6 Conclusion

This chapter contains the results of the statistical analysis of the data collected during the course of the study. Results were presented by using four sections that addressed statistical analysis of the BDI–II in relation to demographics, participants' experiences regarding the transition to university life, awareness of depression, and organisations aimed to assist with depression and help-seeking behaviour of students with regard to depression, respectively. In the following chapter, these results will be discussed to give the reader insight into the relevance of these findings.

Chapter 5: Discussion

5.1 Introduction

This final chapter presents the discussion and interpretation of the results in relation to previous literature on depression in university students, as well as in relation to the Health Belief Model, which was the adopted paradigm for this study. This chapter follows the same format as the results chapter to ensure consistency. Following the discussion of the results in relation to the paradigm and literature, the limitations of the study were addressed, followed by recommendations for future research. Finally, the conclusion draws significant findings together.

5.2 Discussion of Results

5.2.1 Analysis of the BDI–II score results for the sample group. Total scores for the BDI–II assessment were calculated for each participant in the study to determine if there were any similarities between the participants' scores and previous literature. The results from the analysis showed that more than half of the participants presented with some degree of depressive symptoms (mild, moderate, or severe depression). These high rates of depressive symptoms in the sample group corresponded with previous literature that shows that the prevalence of depression in the university student population is increasing globally (Eisenberg et al., 2007b; Hunt & Eisenberg & 2010; Zivin et al., 2009). Additionally, the results in this study show that of the students who fell into the mild, moderate or severe depressive range, the most prevalent score range was that of severe depression. These results highlight that not only the prevalence of depression is increasing, but the severity of the depression experienced by students is also getting worse. The increases evident in both the prevalence as well as severity of depression in the student population suggest that current intervention methods applied by universities to deal with depression are not dealing with this growing concern effectively. Buchanan (2012) purports that there are significant gaps in the literature on the prevention of depression in university students. Literature also revealed that despite the implementation of interventions for depression in university settings, unified studies on these interventions are lacking (Buchanan, 2012). If we are not assessing intervention strategies for depression effectively, we are unaware of the effectiveness of these interventions or how to correct any shortcomings that these intervention strategies might have.

The total BDI–II scores of participants were also compared with various demographic characteristics of the sample group (race, gender, age, faculty of study, and whether the participants had a previous history of depression) to determine any relationship between these characteristics and participants' BDI–II scores.

The results showed that no significant differences could be found between gender, age groups, racial groups, or enrolled faculty of study and participants' BDI–II scores. The researcher believes that, because the majority of participants who participated in the study shared similar demographic traits of being white, female, aged 19, and being enrolled in the Faculty of Humanities. The distribution of demographics is represented in the table below:

Table 5.1

Comparison of Demographic Distribution

Demographics						
Race	**White (74%)**	Black (22%)	Indian (2%)	Coloured (1%)	Other (1%)	N/A
Gender	**Female (84%)**	Male (16%)	N/A	N/A	N/A	N/A
Age	18 years (19%)	**19 years (58%)**	20 years (13%)	21 years (8%)	22+ years (2%)	N/A
Faculty	**Humanities (59%)**	Natural Science (19%)	Education (13%)	Law (4%)	Health Science (3%)	Engineering (2%)

The limited demographic distribution of participants diminished the value of the BDI–II analysis according to demographic traits. There was not enough variance in participants' age, race, or faculties of study to run comprehensive analyses. This led to either limited analysis of these demographic characteristic or no analysis at all. The researcher was hoping to gain a better demographic representation of the general contemporary population of South Africans; however, the sample distribution was more closely related to demographic distributions of studies conducted before the era of apartheid, compared to the demographic representation of students who attend South African universities today (Bowman & Payne, 2011). The skewed demographics of the participants who participated in the study could be a result of the following:

- Faculty of study: The Department of Psychology falls under the Faculty of Humanities, which explains the high number of students enrolled in the Faculty of Humanities. Similarly, most participants enrolled in the Faculty of Natural and Agricultural Sciences were registered to study BSc Human Physiology, Genetics and Psychology, which required them to complete the first-year psychology module as part of their course work. This accounts for the high number of participants who were enrolled in the Faculty of Natural and Agricultural Sciences,

- Gender: In recent years, psychology has become a female-dominated field. Women now comprise 58% of the American Psychological Association's (APA) membership and hold more than half of the governance positions (Clay, 2017). Women not only dominate the APA but also dominate psychology in terms of numbers in the educational pipeline and workforce (Clay, 2017). For this reason, it is not surprising that the majority of the participants in this study were female. However, it was interesting that no significant difference could be found between males and females with regard to BDI–II scores for depression. This differs from previous literature that states female undergraduate students are more likely to screen positive for anxiety and depressive disorders, when compared to their male counterparts (Eisenberg et al., 2007b).

- Age: The reason for the limited distribution of age in this study is that only first-year psychology students were eligible to participate in the study. The majority of individuals enter university shortly after completing Grade 12. As most students matriculate in the year that they turn 18, it makes sense that the majority of participants in the study would be about 19 years old in their first year of university.

- Race: The researcher is unsure why there was such a big discrepancy between white and black students in the study. It is understandable that there would be a smaller number of participants from the Coloured, Indian, and Other racial groups, as they make up a smaller number of the greater South African population. However, biggest part of the South African population is black; therefore, the researcher expected to have more black participants in the study than was actually the case (World Population Review, 2018). The lack of participation from black students in this study was surprising, considering the fact that Bowman and Payne (2011) found that black students were 3.2 times more likely to make use of student support services due to anxiety and depression when compared to white students. First-generation black

students are considered a vulnerable group for developing depression, as overall, the transition to university is considered especially traumatic for black students, due to their increased exposure to risk factors such as low education level of parents and moving away from social support systems, when compared to students from other racial groups (Sennett et al., 2003). For this reason, the researcher believes that further research should be conducted regarding the reason for low participation rates by black students in the study as a way to ensure that future research represents the general South African population more accurately.

One demographic characteristic of personal history of depression showed significant differences regarding BDI–II scores. Analysis of participants' BDI–II scores compared with whether they had a personal history of depression showed that students with a history of depression on average scored twice as high for depressive symptoms on the BDI–II, compared with students with no personal history of depression. This is in line with literature that indicates that individuals with a history of depression can exhibit dysfunctional attitudes and behaviour that lead to a downward spiral of depression (Abela et al., 2011). This downward spiral can cause individuals to form negative cognitive attitudes, which increases the chances of chronic depression or relapses of depression during later stages of their lives (Abela et al., 2011). Screening students for depression as they enter university can assist in identifying students who are currently suffering from depression or have a personal history of depression. Identifying these students can assist the university in providing much-needed support to these high-risk students and reduce the risk of such students relapsing into depression (Eisenberg et al., 2007b).

5.2.1.1 Did completing the BDI–II assessment affect the participants in any way?

The results of the study show that almost a third of participants stated that they had been affected in some way by completing the BDI–II assessment. A content analysis of participants' explanations regarding the effect they had experienced was conducted to interpret the number of participants who had been affected in a way that could be considered a "cue to action" as stated in the Health Belief Model (HBM). The content analysis showed that the majority of the participants had been affected in a way that made them reflect on themselves or consider taking action to correct the way they were feeling, which could be considered a cue to action (Castonguay, Filer, & Pitts, 2016). In a study by Castonguay et al. (2016), they deduced that the primary barrier preventing depressed individuals from seeking

help was the fear of the unknown treatment process. They also found that cues to action served to reduce this fear by providing guidance and validation that help was needed. This illustrates the potential value of utilising the BDI–II assessment to assist individuals in identifying possible depressive symptoms, as well as to prompt students to take action to correct their current situation.

The value of the BDI–II assessment as a cue to action is that it assesses depression through two components: the physical or "somatic" component (loss of appetite, etc) and the affective component (mood) (Steer, Ball, & Ranieri, 1999). The items of the BDI–II assessment focus on both the physical and affective components of depression, which allows respondents to evaluate their current well-being against all these symptoms. This showed to be extremely valuable in allowing participants to gain introspection into their emotional well-being. The vast majority of participants in the study mentioned that they were aware what the symptoms of depression are; however, the participants' responses to how the BDI–II had affected them illustrate that although students believed they were aware of the symptoms of depression, this did not automatically result in all participants being able to identify these symptoms in themselves. This relates to the study conducted by Tjia et al. (2010), who found that medical students who had completed psychiatric modules in their studies were no more likely to seek help when compared with medical students who had not yet done their psychiatric modules. The reason offered for this is that students do not apply knowledge about mental illnesses willingly to themselves. Tjia et al. (2010) argue that the awareness and help-seeking behaviour for depression need to be discussed at a forum that is separate from the students' compulsory psychiatry education. The BDI–II assessment can be regarded as an opportunity for psychology students to gain introspection into their own emotional well-being, which falls outside their compulsory psychological education.

5.2.2 How did students experience the transition into university life? This section of analysis aimed to identify whether the transition to university was a significantly traumatic experience that could lead to the onset of depression. Bayram and Bilgel (2008) remark that distressing life events often trigger depression and that most university students experience a critical transitory period in which they progress from adolescence to adulthood. Newly faced intellectual and social difficulties could cause emotional pressure, which in turn could lead to an increased risk of depression. Almost half of the students who participated in a study by Hyun, Quinn, Madon, and Lustig (2006) stated they experienced problems at university that

affected their emotional well-being in the last year. In addition, over half of the participants also mentioned that they knew another student who had experienced a university-related problem in the last year. Many studies point to the elevated risk of depression among first-year undergraduates caused by the transition to university (Bayram & Bilgel, 2008). As identified in section 4.3.1 of the results chapter, the majority of participants experienced the transition to university as moderate; however, more than a third of students stated that they had experienced the transition to university life as difficult, which is in line with the literature.

Participants were also asked to rate their emotional well-being before and after the transition to university. These questions were asked to gauge the prevalence of participants who believed their emotional well-being had increased, decreased, or remained the same after their transition to university life.

The results indicate that there was a slight decrease in perceived emotional well-being from before to after the transition to university. Similar results were found in a study by Andrews and Wilding, (2004), who conducted a longitudinal study with students entering university in the United Kingdom. Their aim was to identify whether depression increased after university entry. The study identified that 9% of students who previously had been symptom free were presenting symptoms of depression mid-way through the course of their academic year. The results in this study are in line with Andrews and Wilding's (2004) findings and show that students not only struggled with the transition to university, but some students' emotional well-being had also been affected in the process, which in turn could lead to the onset of depression. These results reiterate the need for universities to put processes in place to assist students who are struggling to adapt to university, as this is an especially trying time for some students. These processes should also be monitored and evaluated regularly to confirm that these processes successfully assist students who are struggling with the transition to university (Buchanan, 2012).

5.2.2.1 With which aspects did students struggle during the transition to university life? The researcher provided participants with options of possible difficulties they could have experienced during the transition to university. These options were sourced from local and international literature on the topic. The researcher aimed to use this question to establish if the difficulties identified in previous studies were also relevant to first-year psychology students at the UP.

Students reported social difficulties as one of the most difficult aspects faced when moving from high school to university. The most common difficulty students reported facing was being away from their support systems. A large majority of the participants in the study also experienced social stressors (stressful social events such as breaking up with a boyfriend/girlfriend, fights with friends, etc.).

Literature has shown a notable association between social dynamics and depression. Dwyer et al. (2014) found a negative relationship between perceived social support and depression. The results indicated that students with lower perceived social support had higher levels of depression. Consequently, it was shown that moving away from one's social support system and difficulties in establishing new social support systems at university increased student's vulnerability to depression (Dwyer et al., 2014). Sennett et al. (2003) found that this difficulty was especially prominent for black students in South Africa because, on average, they possess fewer social support structures, while at the same time facing greater social and physical relocation.

Literature suggests a strong correlation between social dynamics and depression. Students' lower level of perceived support resulted in higher levels of depression (Dyrbye et al., 2006). Furthermore, moving away from one's support system, while having difficulty establishing new support systems at university at the same time has proved to be a risk factor for the development of depression among students (Dyrbye et al., 2006).

Other studies have shown that single students are more likely to be depressed compared with married students or students in a romantic relationship. The hypothesis for these findings is that spouses or romantic partners of students provide emotional support to their partners that can assist in guarding against depression (Dyrbye et al., 2006). This emphasises the importance of universities assisting students in formulating social support systems, as this is a common concern that results in many students feeling depressed (Dyrbye et al., 2006).

Financial constraints affected a third of participants in this study, during their transition to university life. This is in line with findings of a previous study conducted in the UK that found that roughly 20% of students who participated in the study were struggling with financial difficulties because of entering university (Andrews & Wilding, 2004). Entering university can lay a substantial financial burden on students, which in turn can increase their vulnerability for depression. In their study, Andrews and Wilding (2004) found that financial

difficulties were the only aspect that had an independent relationship with depression, for students during the transition to university life. As South Africa is a Third-world country, financial constraints for students could result in an even greater effect on their emotional well-being compared with findings of Andrews and Wilding's (2004) study, which was conducted in the UK. For this reason, the researcher suggests that further research be conducted on the effect that financial constraints can potentially have on depression levels of South African university students.

5.3 Awareness Levels of Students Regarding Various Aspects of Depression

This section of the discussion aims to bring to light the prevalence of awareness levels of participants with regard to various aspects of depression. These aspects of depression include participants' view of the severity and susceptibility of depression as an illness, organisations inside and outside of the university aimed to assist individuals struggling with depression, and whether students were aware of suffering from depression at the time of taking part in the study. The purpose of this section of analysis was to identify the prevalence of awareness levels in first-year psychology students. The researcher also aimed to identify any noticeable gaps in participants' awareness of depression that could negatively influence the way in which the students managed depression, as one cannot treat depression if students are not aware that they are suffering from depression (Kranzler et al., 2015).

5.3.1 Are participants aware what the symptoms of depression are? Awareness that one is suffering from depression is the first step in deciding to seek help (Kranzler et al., 2015). Yet, to identify if one is struggling with depression, the individual first needs to know what the symptoms of depression are.

Interestingly in this study, the vast majority of participants stated that they were aware what the symptoms of depression are. The reason for the high number of students stating to be aware of depressive symptoms could be explained by the fact that these students were studying a module in psychology. Psychology students could have richer insight into mental disorders such as depression when compared with the general population. However, the researcher believes that it is more likely that so many students mentioned that they were aware what the symptoms of depression are due to the way in which the questionnaire was composed. The BDI–II section of the questionnaire was positioned before the question that asked participants whether they were aware what the symptoms of depression are. This is

important to note as the items of the BDI–II aim to address how often participants experience various somatic and cognitive symptoms of depression. In turn, this means that all participants had just covered the various symptoms of depression in the BDI–II section of the questionnaire.

The Hawthorne effect could be another possible explanation for the high number of participants who stated their awareness of the symptoms of depression. The Hawthorne effect states that participants can change their behaviour or outcomes towards a study, which would not be directly attributable to the participant but be influenced by the participant's awareness of being in a research study (Sedgwick, 2012). In other words, participants experiencing the Hawthorne effect could alter their responses to more desirable ones since they were aware that they were in a research study. The researcher believes that this could be a possibility in this study, since all the participating students were registered for a module in psychology and consequently could think that the researcher expected them to know what the symptoms of depression are. If this was case, then participants could have tailored their answers to meet what they believed were the expectations of the researcher.

The researcher believes that the awareness levels pertaining to depressive symptoms were overly exaggerated in the study and not an accurate representation of the sample group. This is believed to be the case, as almost all participants stated that they were aware of the symptoms of depression; however, a notable portion of participants were unable to identify whether they were suffering from depression at the time. This discrepancy in responses to these two questions means that participants either were not actually aware of the symptoms of depression, or alternatively were unable to identify these symptoms in themselves. For either of the latter explanations, conducting a screening assessment for depression as students enter university can assist students in gauging whether they are suffering from depression (Buchanan, 2012).

5.3.2 Are participants aware of the severity of depression? Depression is a worldwide epidemic and causes significant impairments on an individual and global level (World Health Organisation, 2018). The researcher aimed to identify if participants shared the sentiment in the literature that depression is a severe illness.

The results show that this was the case with the vast majority of participants rating depression as very or extremely severe. The HBM states that one of the factors that determine

if participants will seek help for an illness depends on how severe they think the illness is . As participants view depression as a severe illness, according to the HBM, this makes them more likely to seek assistance for this disorder than if students did not feel depression was a serious illness. It should be noted that the severity of an illness is only one aspect identified by the HBM that an individual considers when deciding whether to seek help for the condition. The severity of a condition does not influence help-seeking behaviour in isolation. Other aspects such as an individual's belief of his or her susceptibility to contract the illness, or the individual's belief regarding the effectiveness of treatment methods to assist in improving the issue, also play a role in the individual's decision-making process (Henshaw & Freedman-Doan, 2009).

5.3.3 How susceptible do participants believe they are to suffer from depression?

As discussed above another aspect identified by the HBM that determines whether students will seek help for their depression depends on their perceptions regarding how susceptible they believe they are to contract the illness. It was interesting to note that most participants believed they were not that susceptible to depression despite the fact that depression is the most common psychiatric disorder worldwide (World Health Organisation, 2018). A possible explanation for these results could be that many individuals are not aware of their susceptibility to depression. Most individuals are not sure whether the sadness they are feeling should be considered a normal fluctuation of emotions or whether the sadness is an indication of depression. Most often individuals will rely on an expert to make that decision for them (Henshaw & Freedman-Doan, 2009). The concern with this is that if participants are unaware of their susceptibility towards depression, they are not likely to seek help, where they would have the opportunity to discuss their uncertainties with an expert. In turn, this could mean that individuals suffer with depression for a longer time and are only likely to seek help when the symptoms become more severe (Hunt & Eisenberg, 2010).

In addition to this, the HBM purports that once a disease has been diagnosed, the dimension regarding the susceptibility of the individual to contract a disease shifts to the individual's acceptance of the diagnosis. If individuals do not accept the diagnosis provided to them, they are also not likely to seek help for that diagnosis (Becker & Maiman, 1980). A number of perceptions and stigmatisations can lead to individuals not accepting the diagnosis (i.e., feeling that depression affects only the emotionally weak) (Henshaw & Freedman-Doan, 2009). The researcher believes that students studying psychology may believe that they could be immune to the onset of depression due to their knowledge of the topic. If this is the case,

psychology students may believe they are not susceptible to depression and could even reject such a diagnosis.

5.3.4 Are students aware of the free services and organisations on and off campus that are available to assist students who are suffering from depression? If the first step in the process of seeking help for depression is individuals' awareness that they are struggling with depression (Kranzler et al., 2015), following that, these individuals would need to know where to seek help. The questionnaire asked participants if they were aware of the student support services situated on campus, which are specifically there to assist students struggling with psychological issues, including the variations of depression. Alarmingly, the results showed that almost half of the participants were not aware of the student support services available at the university.

The participants were then asked if they were aware of organisations that operated separately from the university, such as FAMSA and SADAG, which assist individuals struggling with depression. Results indicated that even fewer participants were aware of such organisations, with more than two thirds of participants stating that they were unaware of such organisations.

Depression is known to have an effect on student's tertiary education and their lives as a whole (Putwain, 2007). Research has shown that university years are an important transitory period for students, and as such offer a unique opportunity to assist students in this volatile period (Dwyer et al., 2014). Despite this, literature shows that few students seek help for mental illness (Hunt & Eisenberg, 2010).

Many reasons have been identified for students not seeking help for mental disorders, including a lack of awareness that one is suffering from a mental disorder, a lack of awareness regarding psychological support facilities available for students, and a reluctance of students to engage with psychological services (Eisenberg et al., 2007b). Literature has shown that students can experience fear of embarrassment and shame about disclosing details about their mental health disorders, particularly at the beginning of their university experience (McAuliffe et al., 2012). However, research also indicates that these feelings of shame and embarrassment are reduced in the student population when universities are more open and willing to talk to their students about mental disorders (McAuliffe et al., 2012).

The researcher believes that UP should educate and inform students better about depression as an illness as well as facilities available at the university that provide support to students struggling with depression. This information should be easily accessible and regularly prompted to students. Information should also be provided to all students about organisations that operate outside the university, should students feel uncomfortable disclosing such information about themselves at the university.

5.4 Help-seeking Behaviour of First-year Students

The focus of this section is to discuss the help-seeking behaviour of the sample group. The researcher addresses the following: prevalence of help-seeking behaviour in participants with a history of depression; participant responses to the effectiveness of different forms of treatment for depression; participants' perceived barriers to seeking help; participants' views regarding stigma held against students who seek help for depression; as well as whether the participants believed there was any value in seeking help for depression from the student support facilities at the university.

5.4.1 Prevalence of help-seeking behaviour in participants with a history of depression. Nearly two thirds of the participants who stated that they had a personal history of depression had received some form of treatment in the past to assist with their depression. Literature shows that untreated mental disorders are highly prevalent in student populations. Multiple studies indicate that less than half of students diagnosed with depression receive treatment for their illness (Eisenberg et al., 2007b; Hunt and Eisenberg, 2010). In relation to the literature, the results from the study are promising, as more than half of the participants stated that they had received treatment for their depression. However, this should not undermine the fact that roughly one in three participants still mentioned that they did not receive any treatment for their depression. The high number of students seeking help for their depression could also be linked to their interest in psychology. As the majority of the participants in the study were registered for a degree in psychology, it could be assumed that these individuals had an above-average interest in psychology that could make them more likely to seek help for psychological difficulties, including depression, when they presented with symptoms.

5.4.2 Effectiveness of various forms of treatment for depression. The Health Belief Model (HBM) states that individuals are more likely to seek help for an illness if they feel

that doing so would be effective in treating the problem (Henshaw & Freedman-Doan, 2009). For this reason, the researcher aimed to identify participants' beliefs regarding various forms of treatment methods for depression. The aim was to identify which treatment methods participants were most inclined to use if they were to present with depressive symptoms. The results of the study show that of the seven options made available in the questionnaire (student support services available on campus, utilising organisations such as FAMSA and SADAG, online counselling services, talking about your difficulties with someone in an unprofessional manner, medication, reward/relief activities, religion/spirituality, and exercise and a healthy diet) participants believed that eating well and exercising, as well as taking medication, would be the most effective ways to treat depression. These results highlight a preference of participants rather to use exercise, diet, and medication over therapeutic methods of treatment. According to the HBM, participants in the study would be less likely to make use of therapeutic treatment methods compared with medication, diet, and exercise.

The third most effective form of treatment identified by students was that of organisations separate from the university such as FAMSA and SADAG. This is very interesting especially since most participants were unaware of the existence of such organisations. However, the researcher believes that the high number of responses for this category could be a result of participants feeling that this category also included the likes of private practicing psychologists or psychiatrists (as this was not provided as a separate treatment method). The results also show that participants believed organisations separate from the university would be more effective in treating depression than student support services available on campus would be. Student support services were believed on average to be slightly to moderately effective in treating depression and only slightly more effective than talking to someone in an unprofessional manner. This indicates the lack of confidence that participants had in the ability of student support services to assist with depression.

The HBM states that if students do not believe that student support will be effective in treating depression, they are less likely to seek help from student support for their depression. Efforts should be made to identify why students do not feel that student support would be effective to treat depression. Similar to Shaddock (2004), the researcher believes that improving on-campus health services and education programmes about mental health should be emphasised. There is no value in having support services for students if they believe there is no value in making use of them.

Stanley, Mallon, Bell, & Manthorpe, (2010) believe that failure to engage with university support services could be a primary factor in completed suicides of students at university. The University of Pretoria has already had a number of cases where attempted suicide or suicide was committed on the premises of the university (Bateman, 2012; Citizen Reporter, 2014; Keppler, 2017; Ngwenya, 2014).

The researcher is not asserting that incidents of suicide and suicide attempts at the University of Pretoria were due to depression; however, it is quite possible that depression might have been a contributing factor. By improving students' perceptions about the effectiveness of student support services as a treatment method, as well as by improving on the aspects that give students this poor perception of student support, could minimise the risk of depression as well as suicide in the future.

Religion was regarded as the fourth most effective treatment method to deal with depression. Koenig (1998) reviewed 89 studies of religion and mental health and found that a significant inverse correlation emerged between religion and depression. One suggestion of why this could be is provided by Wolinsky and Stump (1996, as cited in Koenig, 1998) who state that depression can make individuals feel helpless to their depressive symptoms; however, religiosity may contribute positively to preserving one's sense of control over the situation.

Participants considered online counselling services as the second least effective treatment method for depression. This is interesting to compare with a study conducted by Ryan et al. (2010), who found that while students were less likely to seek help from traditional student services in times of escalating psychological distress, their intention to use online mental health interventions increased. It was also found that online counselling services could be beneficial due to the convenience factor, and because it might reduce feelings of vulnerability that some individuals experience with face-to-face counselling (McAuliffe et al., 2012). Further studies should be conducted on online counselling services in the South African context to understand the difference in responses in this study compared with responses reported in previous literature.

Finally, participants believed that reward/relief activities were the least effective method to treat depression. This is promising to see, as literature shows that trying to treat depression by engaging in activities that provide reward/relief or instant gratification (smoking, drinking,

reading, playing video games, etc.) may make the individual feel better while engaged in the activity, yet often extenuate the depression in the long run (Cranford et al., 2009; White et al., 2006).

5.4.3 Barriers that could stop participants from seeking help for depression. Numerous barriers that prevent students from seeking help for depression have been identified in the literature. It is important to consider these barriers, as the HBM shows that the likelihood of individuals seeking help for depression is influenced by individuals' perceived barriers to seeking help (Henshaw & Freedman-Doan, 2009). The barriers that prevent students from seeking help for depression were explored in the questionnaire. The questionnaire provided participants with seven possible barriers that could hinder them from seeking help for depressive symptoms. Participants were also given the option to specify any other barriers that were not specifically mentioned in the questionnaire. The following seven options were provided: financial constraints, lack of time, fear of stigmatisation, treatment not easily accessible, lack of knowledge of where to seek treatment, previous negative experiences regarding treatment, and the belief that depression is not a serious illness.

Results from the questionnaire show that participants identified a lack of time as the most common barrier towards seeking treatment. Roughly, half of the participants mentioned this as a barrier that might prevent them from seeking treatment. With such a large portion of the sample group identifying this as a perceived barrier to seeking treatment, efforts should be made to assist students with their time management. The stress of coping with a busy schedule could be a risk factor that could lead to burnout and depression (Bayram & Bilgel, 2008). A timesaving alternative to face-to-face counselling is that of online counselling (McAuliffe et al., 2012). The researcher believes that the university should consider the plausibility of providing such a service in the future to assist students who have limited time available to seek help.

The second most common barrier identified by participants was that of financial constraints. Similar to the number of participants that identified a lack of time as a barrier, almost half of the participants identified financial constraints as a barrier that could prevent them from seeking help for depression. This is an interesting finding, considering the university offers free services at Student Support to assist students with their depression. This reiterates the importance of making students aware of student support and increasing the confidence that students have in the effectiveness of Student Support to assist in treating

depression. By improving the quality of services at Student Support and ensuring all students are aware of the services made available to them free of charge, the university can mitigate the financial constraint barrier that some students experience.

Participants also identified a lack of knowledge about where to seek treatment as a barrier that would hinder them from seeking help. As mentioned before, if students are unaware of the services that are available to them, they are not likely to make use of these services (Henshaw & Freedman-Doan, 2009). As a lack of time was the most prominent barrier identified by participants in hindering help seeking behaviour, the university can make efforts to make the information easily accessible. This will reduce the time it takes for students to find the information and at the same time increase the exposure of Student Support services throughout the university.

The fear of stigmatisation was also a notable barrier identified by participants that prevented them from seeking help. The researcher will discuss this barrier more under the next section of the discussion. Finally, a small portion of participants identified the belief that depression is not a serious illness, treatment not being easily accessible, and previous negative experiences regarding treatment as other barriers that would prevent them from seeking help for depression.

5.4.4 Stigmatisation and help-seeking behaviour. In this study, nearly half of the participants believed that stigma was attached to seeking help for depression. In addition to this, over a third of participants also identified the fear of stigmatisation as a barrier that would hinder them from seeking help for depression. This is in line with previous research that identified stigmatisation as a prominent barrier that hindered help-seeking behaviour for depression (McAuliffe et al., 2012).

Research has shown that students can often experience shame and embarrassment from disclosing their depression to others. This is especially prominent for first-year students when they are starting university (McAuliffe et al., 2012). Students can feel that depression is a sign that they are not coping with the transition to university and consequently can be reluctant to open up about their depression, out of fear of being judged as not being able to cope (McAuliffe et al., 2012). In addition to this, literature shows that students are also reluctant to seek help for depression at universities, as they are concerned that making the university aware of their depression could affect their academic opportunities negatively

(Chew-Graham, Rogers, & Yassin, 2003). The researcher believes that this could be especially true for psychology students, as they may feel that disclosing such information could hinder their chances of being selected for the master's programme to become a practicing psychologist. Psychology students could believe easily that presenting with depression could be considered as a sign that they are inadequate to assist others with mental disorders, as they themselves are struggling with depression.

Possible solutions to tackle this issue of stigmatisation could involve ensuring adequate psycho-education is provided to both students and university staff (Shaddock, 2004). Psycho-education provided to students should also address uncertainties that students may have regarding depression and academic opportunities, making sure students are aware that support services are separate from any faculty of study. It should be made clear to students that information disclosed to the student support services is kept confidential and will have no bearing on their academic opportunities. Psycho-education provided to students should also include information of organisations such as FAMSA and SADAG that are separate from the university, as this provides an alternative avenue to students for seeking help that is not associated with the university.

Finally, further research should be conducted to identify exactly what stigmas are held towards depression at South African universities. A number of personal and cultural aspects of students and staff members could result in stigmatisation of depression, and we can address them properly only if we are aware of what these stigmas are.

5.5 Limitations

This study was not completed exactly as planned in the research proposal, which has resulted in some limitations of this study. First, the researcher made use of a self-selection non-probability sampling method due to the benefits it provides with regard to obtaining a larger sample size. The researcher also had a time constraint, which affected the decision to make use of a more convenient sampling method. However, a drawback of this sampling method is that it jeopardises the external validity of the study and does not allow results to be generalised (Babbie, 2013).

Second, the study focused only on the awareness and help-seeking behaviour of first-year psychology students at the University of Pretoria. However, the results suggest that the effect of depression is far reaching and will likely affect students of other faculties at the

university, students who have been registered at the university for more than one year, and students at other South African universities. The narrow focus of this study means that the results can be interpreted only in this context and should not be generalised to other university students. Some general inferences can be made where the results correspond with previous literature, but one should be cautious when making such inferences.

Some limitations were also identified with regard to the design of the questionnaire after reviewing the responses to the questionnaire. For instance, the researcher believes that placing the BDI–II assessment at the end of the questionnaire would have garnered better results pertaining to Question 40, which asked participants if they were aware of what the symptoms of depression are. As the BDI–II assessment section was completed before Question 40, the responses to this question may have been influenced. When answering Question 40, participants would have just completed the BDI–II assessment in section 2 of the Questionnaire, which asks questions pertaining to the symptoms of depression. For this reason, it could be assumed that this is likely to have increased participants' likelihood to state that they were aware of what the symptoms of depression are, compared with what the response would have been if Question 40 had been asked before the BDI–II assessment.

In addition to this, the researcher also believes that private practicing psychologists or psychiatrists should have been included as a treatment possibility for students in section 3 of the questionnaire. This section includes a number of questions requiring participants to rate the effectiveness of a number of possible treatment methods. The researcher did not add private practicing psychologists or psychiatrists as a possible treatment method. The researcher believes that this might have influenced the responses of participants to Question 49, which asked participants to rate the effectiveness of utilising organisations such as FAMSA and SADAG, which offer services outside the university. The researcher believes that the inflated perception of effectiveness of these organisations in comparison with other treatment methods such as student support services available to students on campus could be a result of participants believing that this question also referred to private practicing psychologists and psychiatrists. Therefore, private practicing psychologists and psychiatrists should have been added as a separate treatment method, to remove any confusion that may have been experienced by participants.

Two limitations were identified with regard to the sample group that completed the questionnaire. First, the sample group fell short of the desired sample size put forward in the

proposal for this study. The researcher aimed to get 150 students to participate in the study; however, owing to time constraints, the researcher only had two weeks to obtain responses to the questionnaire. In this time, the researcher was able to obtain only 134 responses from first-year psychology students. Secondly, the researcher aimed to provide a better picture of students in a post-apartheid university; however, the demographic distribution of participants showed that white students still made up 74% of the participants and females made up 84% of the sample group. The self-selected, non-probability sample method utilised in this study did not guard against any disproportional demographic distributions; therefore, future studies should strive to obtain responses from a sample group that is more aligned with the demographic distribution of students in the current South Africa.

Finally, the limitations of the Health Belief Model as a theoretical framework need to be considered. The HBM was used successfully in past research focusing on mental disorders (Henshaw & Freedman-Doan, 2009). It offers a clear set of propositions about help seeking that can be used to differentiate help-seekers from non-help-seekers and has the advantage of highlighting specific propositions about help-seeking behaviour. The HBM is a rational model that assumes that individuals go through a systematic process in which they evaluate the benefits compared with the disadvantages of particular help-seeking behaviour and base their decision accordingly (Henshaw & Freedman-Doan, 2009). However, this can be limiting in that it does not consider other processes that fall outside of this rationale.

Current research has suggested a dual process model that people use to process the world (Wills & Gibbons, 2009). According to this model, one system is a slower, conscious, and more reasoned system, similar to that outlined in the HBM. The other is a faster, less conscious, and instinctive system that seems to be influenced by thoughts and heuristics (Wills & Gibbons, 2009). The HBM does not emphasise these less rational kinds of processing and therefore can be limiting in its interpretation of help-seeking behaviour (Wills & Gibbons, 2009). It is suggested that future studies aim to address this non-rational processing system to see if more light could be shed on help-seeking behaviour of students.

5.6 Recommendations for Future Research

First, efforts should be made to address the limitations discussed above, as this will improve future research on this topic significantly. By making use of a probability sampling method and collecting data from students registered for other courses, enrolled at university

for longer periods, as well as other university institutions, will greatly improve the scientific soundness of the study and allow for greater generalisation of the results.

Second, this study was descriptive in nature and consequently aimed to measure and describe variables as they occur naturally in order to gain better understanding of the variables. The researcher recommends that future studies go beyond descriptive research methods and aim to explain 'how' and 'why' questions pertaining to the results that were identified in this study. By trying to identify an explanation of these results, a better understanding of the personal and institutional sources of these problems can be identified and addressed (Hyun et al., 2006).

Finally, the researcher believes that efforts should be made by future studies to monitor and evaluate the effectiveness of the current methods utilised by UP to educate and support students with depression. The results of this study highlight the fact that the current methods implemented by UP to assist students with depression have several limitations. The study identified many students who were not aware of the services offered by UP to assist with depression, while other students stated that their perception regarding the effectiveness of these services were poor. The HBM shows that a lack of awareness or a lack of belief in the effectiveness of a service will decrease the likelihood that students make use of these services (Henshaw & Freedman-Doan, 2009). The researcher is aware that the university offers educational information as well as support services to assist students struggling with depression and other mental disorders; however, these services do not address the problem effectively. The following suggestions are made based on the feedback received from participants in this study.

- Psycho-education: The university offers awareness regarding the difficulties experienced during the transition to university, the danger of mental health disorders, as well as the services available to students on campus through presentations during the first-year orientation week. This information is also made available through the UPO 101 course, which is a required module to be taken by all first-year students. However, the results of this study show that these methods are not very effective in relaying this information to students. A possible reason for this is that many first-year students do not realise the value of the orientation week and UPO 101 course. Many students skip orientation provided by the university and put very little effort into compulsory courses such as UPO 101, as they have little bearing on their overall degree marks (J. Versfeld,

personal communication, August 15, 2017). A possible solution to this problem is to run psycho-education programmes constantly throughout their university careers. Possible ways in which this could be done is to make this information easily accessible online. This means that students should know exactly where to find this information on the UP website if they require it. If students are required to search through the site to find the information, they are much less likely to do so and consequently will not be exposed to the information. Another suggestion would be not only to share the information with students during orientation, but also to run follow-up campaigns instead to remind students of this information throughout the year. External organisations such as SADAG and FAMSA could be given the opportunity to speak to students during the year, and an awareness campaign could be run at the university piazza to provide exposure to depression, as well as the services made available to students on campus.

- Reducing stigmatisation: Another benefit of running awareness campaigns is that it can assist in reducing the stigmatisation of depression in the university population. The results of this study show that stigmatisation is still a barrier that hinders help-seeking behaviour in students suffering from depression. Therefore, psycho-education programmes should ensure that changing the stigmatisation of depression is one of the focal points of their psycho-education programmes. It is also suggested that studies further explore the stigmatisation towards depression to identify what negative perceptions are held towards depression and how these perceptions can be addressed.

- Monitor and evaluate: It is recommended that future studies focus on the current methods employed by the university to assist students with depression, in order to identify and address any shortcomings these methods might have. The results of this study raised light to several participants who had issues with the current student support services made available by the university. Future research could consider more closely the concerns students have with services to identify how they could be addressed. One possible issue is the distribution of counsellors among students. Roughly 30 000 students were enrolled at UP in 2017; yet, there are only about 20 psychologists or counsellors employed at the university at either Student Support or as a faculty student advisor who offers support services to students struggling with depression (J. Versfeld, personal communication, August 15, 2017). This means that for each counsellor, there are roughly 1500 students, which is completely disproportional and might very well

lead to students having to wait long periods in order to receive help and could also result in these psychologists and counsellors being overworked.

- Social Support: Another interesting finding of this study was the difficulty first-year students experienced with formulating social support systems when entering university. The researcher would encourage future researchers to consider the social support structure of first-year students in greater depth to identify exactly what these students are struggling with and how the university could assist in helping students formulate social support systems. If students have stronger social support systems, it could make them cope more effectively with other stressors that arise, accomplish more academically and contribute more meaningfully to the university (Hyun et al., 2006).

5.7 Conclusion

Chapter 5 included the discussion and interpretation of the results of the study. The results showed that more than half of the participants exhibited some degree of depressive symptoms. Broadly speaking, participants experienced at least some level of difficulty during the transition to university life, which previous literature has shown can lead to depression.

Regarding the prevalence of awareness of depression, almost all participants stated that they were aware of the symptoms of depression, as well as the severity of depression as a disorder. Yet, despite these results, a notable portion of the participants was unable to identify if they were depressed at the time. These results illustrate the value of conducting screening assessments such as the BDI–II to assist students' awareness regarding their own susceptibility to depression. Another interesting finding regarding the awareness levels of depression is that almost half of the participants were not aware of the student support services available on campus to assist struggling students. In addition, more students were unaware of external organisations such as FAMSA and SADAG that provide support for depression. This is an alarming result, as students are less likely to seek support for depression if they are unaware of where to find help (Henshaw & Freedman-Doan, 2009).

The researcher focused on help-seeking behaviour for depression in the sample group. Results showed that participants perceived exercise and diet, as well as medication, as the most effective forms of treatment for depression, while a lack of time, financial constraints, and stigmatisation were the most prevalent barriers that would hinder participants from seeking help. The results also showed that participants seemed to have doubts about the

effectiveness of student support services offered on campus. For this reason, the researcher recommends that the university put effort into informing students about the student support services available on campus and in the same light aim to improve these services. Overall, there appeared to be consensus between the results of this study and those of previous studies reported in international literature on the topic, despite the contextually specific nature of this study. This is significant, as it suggests that there is a level of similarity between university students worldwide.

The results of this study have provided a conceptual podium upon which several further studies can be conducted. As discussed, research in the field of awareness and help-seeking behaviours of depression and other mental disorders regarding university students is limited. By using variations of the variables included in this study, there are plentiful possibilities regarding research that touches on awareness and help-seeking behaviour of students, as well as research on depression.

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Appendix A – Research Questionnaire

A link to the online Survey Gizmo questionnaire can be found below:

http://www.surveygizmo.com/s3/3757640/Investigating-awareness-and-help-seeking-behaviours-for-depression-2

Investigating awareness and help-seeking behaviours for depression

Section A: Demographics

1. Informed consent to ask participants if they are aware what the study entails and are willing to participate in the questionnaire.
2. Name of participant
3. Email address of participant
4. Contact number of participant (optional)
5. Age of participant
6. Gender of participant
7. Race/ethnicity of participant
8. If you selected other from Question 7 above, please specify.
9. Faculty of study of the participant
10. Degree enrolled for by the participant
11. Number of years the participant has been enrolled at the university of Pretoria

Section B: BDI–II questionnaire

The BDI–II section is a 21-item questionnaire. The items asked in this section of the questionnaire required participants to select one option from each item that best suits their personal feelings over the past two-week period:

12. Sadness
    - I do not feel sad
    - I feel sad much of the time
    - I am sad all the time
    - I am so sad or unhappy that I can’t stand it

13. Pessimism
    - I am not discouraged about the future
    - I feel more discouraged about the future than I used to be
    - I do not expect things to work out for me
    - I feel my future is hopeless and will only get worse

14. Past failure
    - I do not feel like a failure
    - I have failed more than I should have
    - As I look back, I see a lot of failures
    - I feel I am a total failure as a person

15. Loss of pleasure
    - I get as much pleasure as I ever did from the things I enjoy
    - I don't enjoy things as much as I used to
    - I get very little pleasure from the things I used to enjoy
    - I can't get any pleasure from the things I used to enjoy

16. Guilty feelings
    - I don't feel particularly guilty
    - I feel guilty over many things I have done or should have
    - I feel quite guilty most of the time
    - I feel guilty all of the time

17. Punishment feelings
    - I don't feel I am being punished
    - I feel I may be punished
    - I expect to be punished
    - I feel I am being punished

18. Self-dislike
    - I feel the same about myself as ever
    - I have lost confidence in myself
    - I am disappointed in myself
    - I dislike myself

19. Self-criticalness
    - I don't critisise or blame myself more than usual
    - I am more critical of myself than I used to be
    - I critisise myself for all my faults
    - I blame myself for everything bad that happens

20. Suicidal thoughts or wishes
    - I don't have any thoughts of killing myself
    - I have thoughts of killing myself, but I would not carry them out
    - I would like to kill myself
    - I would kill myself if I had the chance

21. Crying
    - I don't cry any more than I used to
    - I cry more than I used to
    - I cry over every little thing
    - I feel like crying, but I can't

22. Agitation
    - I am no more restless or wound up than usual
    - I feel more restless or wound up than usual
    - I am so restless or agitated that it's hard to stay still
    - I am so restless or agitated that I have to keep moving or doing something

23. Loss of interest
    - I have not lost interest in other people or activities
    - I am less interested in people or things than before
    - I have lost most of my interest
    - It's hard to get interested in anything

24. Indecisiveness
    - I make decisions about as well as ever
    - I find it more difficult to make decisions than usual
    - I have much greater difficulty in making decisions than I used to
    - I have trouble in making any decisions

25. Worthlessness
    - I do not feel I am worthless
    - I don't consider myself as worthwhile and useful as I used to
    - I feel more worthless as compared with other people
    - I feel utterly worthless

26. Loss of energy
    - I have as much energy as ever
    - I have less energy than I used to have
    - I don't have enough energy to do very much
    - I don't have enough energy to do anything

27. Change of sleeping patterns
    - I have not experienced any change in my sleeping
    - I sleep somewhat more than usual
    - I sleep somewhat less than usual
    - I sleep a lot more than usual
    - I sleep a lot less than usual
    - I sleep most of the day
    - I wake up 1-2 hours early and can't get back to sleep

28. Irritability
    - I wake up 1-2 hours early and can't get back to sleep
    - I am more irritable than usual
    - I am much more irritable than usual
    - I am irritable all the time

29. Changes in appetite
    - I have not experienced any change in my appetite
    - My appetite is somewhat less than usual
    - My appetite is somewhat more than usual
    - My appetite is much less than usual
    - My appetite is much less than usual
    - I have no appetite at all
    - I have no appetite at all

30. Concentration difficulty
    - I can concentrate as well as ever
    - I can't concentrate as well as usual
    - It's hard to keep my mind on anything for very long
    - I find I can't concentrate on anything

31. Tiredness a fatigue
    - I am no more tired or fatigued than usual
    - I get more tired or fatigued more easily than usual
    - I am too tired or fatigued to do a lot of things that I used to do
    - I am too tired or fatigued to do most of the things I used to do

32. Loss of interest in sex
    - I have not noticed any recent changes in my interest in sex
    - I am less interested in sex than I used to be
    - I am much less interested in sex now
    - I have lost interest in sex completely

Section C: Subjective view of current state of depression

33. Has completing this questionnaire impacted you in any way?
34. If you answered yes to Question 33, how has the questionnaire impacted you?
35. On a scale from 1 (extremely easy) to 5 (extremely difficult), indicate how you experienced the transition to university life?
36. On a scale from 1 (very poor) to 5 (very health) how would you have rated your emotional wellbeing **before** entering university?
37. On a scale from 1 (very poor) to 5 (very health) how would you have rated your emotional wellbeing **since** entering university?
38. Which of the following aspects did you struggle with, if any, when adjusting to university life? (please select as many as suitable)
    - Financial constraints (housing costs, transport costs, needing to find a job to cover bills, etc.)
    - Adjusting to a new city
    - Moving away from your support system
    - Formulating new social support systems
    - Academic difficulties
    - Social Stressors (breaking up with a boyfriend/girlfriend, fights with friends, etc).
    - Adjusting to the culture of the university
    - Other
    - None of the above

39. If you selected other for the question above, please elaborate on these difficulties not mentioned in Question 38.
40. Are you aware of what the symptoms of depression are?
41. On a scale from 1 (not severe at all) to 5 (extremely severe), indicate how severe you think depression is as an illness?
42. On a scale from 1 (not susceptible at all) to 5 (extremely susceptible), indicate how susceptible you feel you may be to suffer from depression?
43. Do you have a personal history of depression?
44. Have you ever received any form of treatment for depression?

45. If you answered yes to Question 44, what was the nature of this treatment and did you find it to be effective?
46. Do you think you are currently suffering from depression?
47. If you found that you were suffering from depression, will it prompt you to seek treatment?
48. Please indicate on a scale from 1 (not effective at all to), to 5 (extremely effective) how effective you feel **free student support services** would be in treating depression?
    - Not effective at all
    - Slightly Effective
    - Moderately effective
    - Very effective
    - Extremely effective

49. Please indicate on a scale from 1 (not effective at all to), to 5 (extremely effective) how effective you feel **utilising organisations such as FAMSA and SADAG that offer services outside the university** would be in treating depression?
    - Not effective at all
    - Slightly Effective
    - Moderately effective
    - Very effective
    - Extremely effective

50. Please indicate on a scale from 1 (not effective at all to), to 5 (extremely effective) how effective you feel **online counselling services** would be in treating depression?
    - Not effective at all
    - Slightly Effective
    - Moderately effective
    - Very effective
    - Extremely effective

51. Please indicate on a scale from 1 (not effective at all to), to 5 (extremely effective) how effective you feel **talking about your difficulties with someone in an unprofessional manner (family, friends, pastor/priest, etc.)** would be in treating depression?
    - Not effective at all
    - Slightly Effective
    - Moderately effective
    - Very effective
    - Extremely effective

52. Please indicate on a scale from 1 (not effective at all to), to 5 (extremely effective) how effective you feel **medication/pharmaceuticals** would be in treating depression?
    - Not effective at all
    - Slightly Effective
    - Moderately effective
    - Very effective
    - Extremely effective

53. Please indicate on a scale from 1 (not effective at all to), to 5 (extremely effective) how effective you feel **reward/relief activities (watching TV, gaming, reading, drinking, smoking, social media, etc.)** would be in treating depression?
    - Not effective at all
    - Slightly Effective
    - Moderately effective
    - Very effective
    - Extremely effective

54. Please indicate on a scale from 1 (not effective at all to), to 5 (extremely effective) how effective you feel **religion/spirituality** would be in treating depression?
    - Not effective at all
    - Slightly Effective
    - Moderately effective
    - Very effective
    - Extremely effective

55. Please indicate on a scale from 1 (not effective at all to), to 5 (extremely effective) how effective you feel **exercise and a healthy diet** would be in treating depression?
    - Not effective at all
    - Slightly Effective
    - Moderately effective
    - Very effective
    - Extremely effective

56. What barriers would stop you from seeking help for depression if you suffered from it?
    - Lack of time
    - Financial constraints
    - Fear of stigmatisation
    - Treatment is not easily accessible
    - Lack of knowledge of where to seek treatment
    - Previous negative experiences regarding treatment
    - Belief that depression is not a serious condition
    - Other
    - None of the above

57. If you selected other from the question above, please elaborate on the other barrier(s) that could prevent you from seeking treatment for depression?
58. Were you aware that there are free confidential services for students on campus (student support)?
59. Are you aware of the organisations FAMSA or the SADAG that offer support to individuals outside the university?
60. Do you think there is any stigma attached to students who make use of these types of facilities?
61. If you answered yes to the above question, what is the stigma that people get labelled with?
62. Do you believe that it is worth seeking support from a counselling service for depression?
63. Please explain your answer to the previous question.