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Depression literacy, attitudes, and help-seeking preferences: a cross-sectional survey of undergraduate students at a university in Western Cape Province, South Africa.

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A mini thesis submitted in partial fulfilment of the requirements of the master's in public health Degree at The University of the Western Cape.

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DECLARATION:

I declare that "Depression literacy, attitudes, and help-seeking preferences: a cross-sectional survey of undergraduate students at a university in Western Cape province, South Africa" is my own work, that has not been submitted before for any degree or any other examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged as complete reference. It is submitted for the degree of Master of Public Health at the University of the Western Cape.

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I would like to acknowledge and thank the Lord Almighty for giving me this opportunity to study further especially in an area I have always been passionate about.

Thank you, my supervisor: Dr Verona Mathews, for directing and encouraging me throughout this study. I am also grateful to family and friends for your unwavering support and always reminding me that I could achieve anything I set out to do.

I dedicate this thesis to myself. This project was so close to my heart as having struggled through depression, I felt that there was room for more knowledge and understanding. I enrolled for this course during one of the most painful and darkest seasons in my life and it opened doors to opportunities, self-fulfilment, new relationships and most importantly such comfort and a new hope. It is well. #DeevinelyEnhanced.

ABBREVIATIONS

ADKQ	Adolescent Depression Knowledge Questionnaire
CI	Confidence Interval
CHE	Council for Higher Educations
COVID-19	Corona Virus Disease 2019
CSSS	Centre for Student Support Services
DALYs	Disability-adjusted life years
DSS	Depression Stigma Scale
GBD	Global Burden of Diseases, Injuries, and Risk Factors Study
GHSQ	General Help Seeking Questionnaire
H0	Null hypothesis
H1	Alternative hypothesis
IHME	Institute for Health Metrics and Evaluation
ISSO	International Student Services Office
LMICs	Low- and middle-income countries
MDs	Mental disorders
MHL	Mental health literacy
OR	Odds Ratio
SDGs	Sustainable Development Goals
UN	United Nations
UWC	University of the Western Cape
WHO	World Health Organisation
YLDs	Years lived with disability
YLLs	Years of life lost

GLOSSARY OF TERMS

Disability-adjusted life years (DALYs)	Years of healthy life lost to premature death and disability. DALYs are the sum of years of life lost (YLLs) and years lived with disability (YLDs). 1 DALY=1 lost year of healthy life.
Years lived with disability (YLDs)	Years of life lived with any short-term or long-term health loss.
Years of life lost (YLLs)	Years of life lost due to premature mortality.

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ABSTRACT

Aim: Mental disorders are a wide range of conditions characterized by occasional or chronic changes in thinking, emotion, or behaviour. They have become a global public health concern due to their widespread occurrences and devastating effects. It is estimated that one in three people in South Africa will or do suffer from a mental health issue in their lifetime. Depression is a common mental disorder and is one of the leading causes of health-related disability amongst young people globally. The main purpose of this study was to determine the knowledge, attitudes, and help-seeking preferences of depression in undergraduate students at a university of the Western Cape.

Methods: A cross-sectional survey following a quantitative research design was undertaken among 308 undergraduate students. The participants completed a self-administered online structured questionnaire that consisted of (1) a sociodemographic characteristics questionnaire, (2) an Adolescent Depression Knowledge Questionnaire which assessed knowledge of depression, (3) a Depression Stigma Scale that measured the respondent's own attitudes to depression, (4) a General Help Seeking Questionnaire that evaluated the intention to seek help and (5) the perceived mental healthcare needs during the Covid-19 pandemic questionnaire.

Results: There were more females than male undergraduate participants (3:1) and almost half were of black African ethnicity. The level of depression literacy in undergraduate students was generally high with 80% of the respondents getting at least 70% of the questions correct. Factors that were significantly associated with respondent's depression knowledge were gender (p=0.037), study year (p values: 0.041 and 0.023), age (p= 0.02 and 0.05) and nationality (0.036). Males were more likely to have knowledge about depression than females (OR=0.640, p=0.037) and participants aged 18-20 years were more likely to have knowledge about depression than those who were above 24 years (OR=1.009). Most students showed positive attitudes towards depression by opposing the stigmatizing statements. However, more than half

responded that depressed people are unpredictable as well as dangerous. They demonstrated greater preferences for non-professionals such as an intimate partner (86%) and friends (71%) as compared to professionals such as doctors (65%) or the university's phone helpline (42%) and 25% would not seek help from anyone. There was a statistically significant association between gender and general help seeking (p=0.038). There was a significant association between personal perceptions (attitude) of depression and general help seeking (p=0.038) as well as attitude of depression and depression literacy. Furthermore, over 70% of the respondents supported that it was necessary to obtain mental health help in coping with the Covid-19 pandemic.

Conclusion: Although depression literacy was high and personal stigma a bit low in this population, there is a need for programs or interventions that can address the negative perceptions and misinformed beliefs to reduce stigma in students with depression and increase and maintain knowledge. It is recommended that the Centre for Student Support Services consistently advertise their services through all possible platforms on campus to raise awareness about their services.

CHAPTER ONE: INTRODUCTION

1.1 Introduction

Mental health is an integral part of health defined as: "*a state of well-being that enables people to cope with the stresses of life, realize their abilities, learn well and work well, and contribute to their community"* (WHO, 2022a: 1). According to the World Health Organization (2022a), mental health is a basic human right. Mental disorders (MDs), also called mental illnesses, are a wide range of conditions characterized by occasional or chronic changes in thinking, emotion, or behavior (WHO, 2022b). Depression, anxiety disorder, bipolar disorder, schizophrenia, and dementia are amongst the known mental disorders (WHO, 2022b). Most MDs negatively affect how individuals feel about themselves and disturb one's ability to relate with others or function each day (Yudofsky *et al.,* 2020).

Mental disorders have become a global public health concern due to their widespread occurrences and devastating effects. It is estimated that one in every eight people globally live with a mental disorder (WHO, 2022b) and to bring it home, one in three people in South Africa will, or do suffer from a mental health issue in their lifetime (SADAG, 2021). According to the latest Annual Mental State of the World report from Sapien Labs, South Africa was identified as the lowest ranked country regarding mental wellbeing (Newson *et al*., 2022). With such findings that reveal the poor standing of mental health in South Africa and many other countries, effective policies and interventions are urgently required.

The risk of mental disorders is a result of a complex combination of individual attributes e.g., ones' thoughts, emotions and genetic makeup with other external elements which include social, economic, cultural, political, and environmental factors (WHO, 2022a). It is imperative to note that effective prevention and treatment options are available for most of these disorders however, only a few have access to proper care (WHO, 2022b). According to Nguse and

Wassenaar (2021), only 27% of those living with severe mental disorders receive treatment in South Africa. Lack of knowledge, stigma, discrimination, and poor healthcare systems are amongst some of the researched barriers to utilization of mental health services for treatment (Adams and Young, 2021; Lu *et al*., 2021; Sarikhani *et al*., 2021).

Although mental disorders have become one of the leading causes of ill-health and disability, they have not achieved appropriate focus, policy attention, or funding but remain a neglected issue especially in low- and middle-income countries (Sarikhani *et al*., 2021; Shumet *et al*., 2019). In line with recommendations from the World Health Organization (WHO), South Africa developed The Policy Framework and Strategic Plan 2013-2020 which identifies key activities that were considered catalytic to alter mental health services to ensure they are accessible, equitable, comprehensive, and integrated at all levels of the health system (DoH, 2022). The purpose of this policy was to provide a roadmap to mental health promotion, prevention of mental illness, treatment, and rehabilitation to all provinces. This policy framework has since lapsed and is yet to be reviewed and updated. This has caused some writers to point this out as a continued neglect of mental health in South Africa (Jeranji, 2021; October, 2021; Robertson, 2021; Teichman, 2022).

Left untreated, mental disorders such as depression can lead to more years lived with disability, reduced quality of life and premature mortality. Poor quality of care, scarcity of resources and insufficient health workers further compound the problem of lack of treatment (WHO, 2019). People with mental illnesses thrive on social support and care to supplement health-care services (Chibanda *et al*., 2020). For example, they often need help in finding employment, educational programs and housing that is suitable for their needs and enables them to be involved within their communities (WHO, 2019). However, many factors including some cultural and religious teachings have influenced negative beliefs about the origins and nature

of mental illness, resulting in stigmatic attitudes towards the mentally ill (Bila and Carbonatto, 2022; Colman *et al*., 2021; Peter *et al*., 2021).

Depression is a common mental disorder whose symptoms include persistent sadness, feelings of guilt, low self-worth, sleeping and eating disorders, poor concentration, and usually multiple physical complaints (SADAG, 2021; WHO, 2021a). Globally, it is estimated that 280 million people have depression (WHO, 2022a). The number of people diagnosed with depression appear to increase (GBD 2019 Collaborators, 2022). The prevalence of depression was reported to have increased from 22.31% in 2010 to 26.05% in 2015 in a national household survey in South Africa (Mungai and Bayat, 2019). Findings from a more recent national survey stated that the overall probable depression prevalence across South Africa varied from 14.7 to 38.8% (Craig *et al*., 2022). The highest depression prevalence (38.8%) recorded in the Northern Cape whilst Western Cape's prevalence was 31.8%.

Within this epidemic of depression among the general population, the vulnerability of young people is greatly concerning. Approximately half of all mental illnesses begin by the age of 14 and 75% by mid-20s i.e., from adolescence to early adulthood (WHO, 2022b). University students are a high-risk population for depression and other common mental illnesses. This is owing to many different extreme pressures such as academic issues, social competency, interpersonal problems, and financial stress, and may lack sufficient social support and access to effective coping strategies that helps to manage those challenges (Aluh, 2019; Arafat *et al*., 2019; Shumet *et al*., 2019). This increases the risk of social dysfunction, substance abuse, underachievement, and poor employability. (Hess, 2004; Rita *et al*., 2018; Wei *et al*., 2015; WHO, 2022b).

The emergence of the novel Corona Virus Disease (COVID-19) in China in December 2019 led to a global pandemic causing over 5 million deaths in 2 years (Aluh, 2019; WHO, 2022c).

In addition to devastating effects on human health and mortality rates, COVID-19 brought with it many other challenges such as job losses, economic impacts, affected relationships and disrupted social structures which are still visible in societies (Gittings *et al*., 2021; Roy *et al*., 2020). It was expected that people may experience increased stress during this pandemic that could be overwhelming and cause strong emotions that destabilize one's mental health (Holmes *et al*., 2020; Marmaya *et al*., 2021; Nguse and Wassenaar, 2021). The factors reported to have led to serious mental illness include the loss of loved ones, persistence of new virus variants, job, or income losses as well as ongoing financial distress and family issues arising from long isolation (Gittings *et al*., 2021; Marmaya, 2021). Mandates like national lockdowns, staying at home, closure of schools, and other social facilities affected life patterns and impacted physical and mental health concerns such as anxiety and depression (Li *et al*., 2020; Roy *et al*., 2020; WHO, 2022c). In conclusion, COVID-19 resulted in devastating hardships that are still shaping the physical and mental health of many populations including South Africans. Data from the GBD 2020 estimated that as a result of the Covid-19 pandemic, there was a resulting 27.6% increase in cases of major depressive disorders and 25.6% increase in anxiety disorder cases globally in 2020 (WHO, 2022d). However, the outbreak also brought an opportunity to identify the strengths and weaknesses of our healthcare systems, amplified the existing mental health gap (Nguse and Wassenaar, 2021), and revealed the urgency to rethink old ideas about how we can integrate better services especially for mental healthcare.

1.2 Problem Statement

Undergraduate students are usually within the age range (18–24 years) that defines a sensitive period where mental disorders commonly manifest (WHO, 2021b). University students constitute the majority of people who suffer from mental illnesses in today's society (Campbell *et al*., 2022; Larson *et al*., 2022). Adding to this concern, is the well-documented association

between depression and suicidal thoughts (Sivertsen *et al*., 2019, WHO, 2021c). Suicide is a serious public health problem which occurs throughout the lifespan. It is estimated that nearly 1 million people worldwide commit suicide every year and it is the fourth leading cause of global death among 15–29-year-olds (WHO, 2021c).

While many college/university campuses offer mental health counseling and treatment services, support groups and 24-hour helplines, many students are still passive in seeking help (Amarasuriya *et al*., 2018; Limone and Toto, 2022). Nearly half of students who screen positive for depression, for example, do not receive treatment (Lattie *et al*., 2021). Untreated mental health issues such as depression and alcohol/drug disorders can lead to some resorting to suicide (WHO, 2021c). Factors such as lack of knowledge, shortage of resources and stigmatization serve as barriers to mental health services among young people who could benefit from these services (Campbell *et al*., 2022; Gebreegziabher *et al*., 2019; Limone and Toto, 2022; Shumet *et al*., 2019). In addition to the COVID-19 pandemic negatively affecting many people's mental health, it further caused an increased disruptions to mental health services and educational institutions which heightened the gap between diagnosis and professional treatment of mental health illnesses (Lattie *et al*., 2021; Larson *et al*., 2022). The promotion of mental health literacy may increase self-awareness and the perceived need to seek professional or medical help.

Taking everything into consideration, prevention, and early treatment of mental health issues in university students, especially undergraduates is by no doubt the most crucial public health priority not only because of the impact it has on the lives of individual students but also on the investment society makes on college students, funds towards MDs and the importance of these students to future social and economic capital. Despite the lack of resources, the gap between mental health burden and treatment can be alleviated by increasing mental health literacy and

changing personal perceptions which has been shown to be linked to more favourable help-seeking behaviours (Aluh *et al*., 2019; Miles *et al*., 2020; Nguyen Thai and Nguyen, 2018; Swarts *et al*., 2010). Preventing poor mental health and supporting positive mental wellbeing needs to be based on an evidence informed understanding what factors influence the mental health of students.

This study sought to explore the knowledge and attitudes towards depression as well as the preferred methods of treatment in undergraduate students at a university in Western Cape Province, South Africa. The significance of this study lies in its contribution to help create better prevention strategies for mental disorders that increases the student's ability to recognise, manage, as well as choose effectual help-seeking preferences especially during stressful situations such as was the COVID-19 pandemic. This knowledge has the potential to infiltrate the community more broadly generating positive behavioral and social change.

CHAPTER TWO: LITERATUTE REVIEW

2.1 Introduction

An individual's state of health is beyond the mere absence of disease but holistically depends on their physical, mental, and social well-being (WHO, 2022a). Mental health is the essential part which describes a state of mental, psychological, and neurological well-being which allows an individual the ability to effectively function, cope and work, making a conscious contribution to his or her community (WHO, 2022a). Mental disorders (MDs) (also called mental illnesses or mental health conditions) are the conditions that affect thinking, perception, emotion, and behavior resulting in an inability to cope with life's common difficulties and routines (WHO, 2022b). Examples of MDs include schizophrenia, bipolar disorder, dementia, and depression.

Mental disorders have become a global public health concern due to their widespread occurrence and devastating effects (Limone and Toto, 2022; WHO, 2022b). They may accentuate the risk of various negative consequences if untreated, the most serious being suicide (Lattie *et al*., 2021; WHO, 2021c). Apart from being a major contributor to the overall global burden of disease, depression is the principal risk factor for attempted or completed suicides (SADAG, 2021; WHO, 2021c). In this second chapter, a review of relevant literature is discussed to contextualize the study. In addition to highlighting the prevalence and burden of mental diseases, the knowledge, attitudes, and help-seeking preferences towards depression with reference to young South African university students is explored. This literature has been discussed under the following subheadings:

- The burden of mental disorders
    - The burden of untreated mental disorders
    - The burden of mental disorders in low- and middle-income countries
- Knowledge regarding mental health
- Stigma and attitudes towards mental diseases
- Beliefs and help-seeking preferences
- Depression
    - Depression prevalence
    - Depression in young people
    - Factors associated with mental disorders in young people
- Mental Health during the Covid-19 Pandemic

2.2 The Burden of Mental Disorders

Mental health disorders are complex and can take any form. Although mental disorders comprise of various problems with different symptoms, they are generally characterized by some combination of abnormal thoughts, behavior, cognition, emotions, and social associations with others (WHO, 2022a). These include substance use, psychiatric mental and neurological

disorders, depression, eating disorders, and suicide risk as well as reasoning and intellectual disabilities. They largely contribute to poor health outcomes, premature death, human rights violations which when taken as a whole, affect national and global economies.

The prevalence and burden of MDs continue to grow globally (GBD 2019 Collaborators, 2022) however, they remain under-reported especially in low- and middle-income countries (LMICs) posing a serious threat to the health systems (Ritchie and Roser, 2020). Their prominent position as a cause of disease burden has been progressively alluded by the results of the Global Burden of Disease, Injuries, and Risk Factors Study (GBD) where burden is determined by considering mortality and disability. There were 654,8 million people suffering from mental disorders in GBD 1990 (GBD 2019 Collaborators, 2022). The outcome of the GBD 2017 estimated that 792 million people in the world lived with a mental disorder which equates to about one in ten people globally (Ritchie and Roser, 2020; IHME, 2018; Roth *et al.*, 2018). Data from the latest GBD 2019 reports a total of 970,1 million cases in 2019 which means the number of people suffering from MDs increased by 48,1% between 1990 and 2019 (GBD 2019 Collaborators, 2022).

Furthermore, the findings of the GBD 2019, showed that MDs remained among the top 10 leading causes of global burden. Table 2.1 provides a summary of the global data on the prevalence of mental disorders from 1990 to 2019. Information was compiled using data from the GBD 2017 and GBD 2019 (IHME, 2018; Ritchie and Roser, 2020).

Table 2.1: Summary of global prevalence for mental disorders in 1990, 2017 and 2019

	Number of people with the disorder in 1990	**Number of people with the disorder in 2017**	**Number of people with the disorder in 2019**

	(Millions)	(Millions)	(Millions)
Any Mental Disorder	654.8	792	970.1
Anxiety Disorders	194.9	284	301.4
Depressive Disorders	170.8	264	279.6
Bipolar disorder	24.8	46	39.5
Eating disorders	8.5	16	13.6
Schizophrenia	14.2	20	23.6
Autism spectrum disorders	20.3	*	28.3

[Source: Ritchie and Roser, 2020; GBD 2019 Collaborators, 2022]; *missing data

Data from Table 2.1 illustrates similar trends in global distribution and burden of MDs across the years. The two most common mental disorders which are among the leading causes of burden globally remain depressive disorders and anxiety disorders whilst eating disorders and schizophrenia continued to be the two least common. The continuous increases in prevalence of these disorders including bipolar disorders and eating disorders is of great concern because they indirectly manifest into other related health complications.

2.2.1 The burden of untreated mental disorders

The UN Sustainable Development Goals (SDGs) in 2015 recognized mental health as one of the priority areas in health policies and development priorities for investment. They emphasized the need for a global response towards prevention and treatment strategies for MDs which was embraced by many countries including SA in 2017. However, according to a report by the WHO "*none of the targets for effective leadership and governance for mental health, provision of mental health services in community-based settings, mental health promotion and*

prevention, and strengthening of information systems, were close to being achieved" (WHO, 2021d: 1). They further reported that in 2020 out of the 80% set targets, only 51% of the 194 WHO member states reported their mental health policy or plan, only 52% countries achieved the target relating to mental health promotion and prevention programmes. It is very concerning that despite the obvious increase in the prevalence of MDs, countries have failed to meet the required need for investments to alleviate this burden. Untreated MDs rarely ever go unnoticed. For example, disorders such as bipolar disorders, depression and eating disorders are of great concern because they indirectly manifest into other related health complications such as suicide and self-harm.

Suicide is a serious public health problem which occurs throughout the lifespan. Completed suicide refers to self-inflicted harmful act that results in death whilst attempted suicide refers to these same acts intended to result in death but may or may not result in injury (Limone and Toto, 2022). Suicide mortality is close to 700 000 deaths per year with many more attempts globally and was rated as the 18th leading cause of mortality in GBD 2019 (GBD,2022; WHO, 2021c). Suicide is a global threat, occurring in all regions i.e., high-, middle-, and low-income countries. In 2019, low- and middle-income countries were responsible for over 77% of global suicides (WHO, 2021c). Depression is the principal risk factor for attempted or completed suicides mostly affecting young people and elderly women in LMICs (SADAG, 2021; WHO, 2021c). As was proclaimed by SADAG, it is estimated that there are 23 suicides and 460 attempted suicides daily in South Africa and man are four times more likely to die by suicide than women (Isilow, 2021). They also found that normally the decision to commit suicide is a result of a combination of issues.

While the link between suicide and mental disorders (in particular, depression and alcohol use disorders) is well established in high-income countries, many suicides happen impulsively in

moments of crisis with a breakdown in the ability to deal with life stresses, such as financial problems, relationship issues, trauma or chronic pain and illness (Limone and Toto, 2022; WHO, 2021c). Nevertheless, suicides and suicide attempts are preventable with timely, and often low-cost interventions at the individual to the population levels. For national responses to be effective, a comprehensive multisectoral suicide prevention strategy is needed. The WHO endorsed its "LIVE LIFE" integrated approach to suicide prevention which recommends effective evidence-based interventions that include restricting access to suicide means e.g., pesticides, incorporating the media to raise awareness, promoting socio-emotional capacity building in young people, and following up on suicidal individuals (WHO, 2021c).

Untreated mental disorders are strong predictors of family dysfunction, reduced life expectancies, poor achievements, social problems, substance abuse and associated medical conditions such as diabetes and cancer (Aluh *et al*., 2020; Gebreegziabher *et al*., 2019; WHO, 2021b). Furthermore, MDs are especially frequent populations affected by humanitarian crises such as mass shootings, natural disasters, and abuse (WHO, 2021b). For example, a review that summarised the high-quality studies that were available on mental health consequences of living through the first year of the COVID-19 pandemic reported that anxiety, depression, and distress increased in the early months of the pandemic (Aknin *et al*., 2022). In another study toward understanding the impact of the Russian-Ukrainian war on the mental health of students and personnel at 4 universities, 97.8% of the respondents reported deterioration of their psycho-emotional status including depression (84.3%), exhaustion (86.7%), loneliness (51.8%), nervousness (84.4%), and anger (76.9%) (Kurapov *et al*., 2022). They also reported an increase in the use of substances such as alcohol, tobacco, and sedatives.

2.2.2 The burden of mental disorders in low- and middle-income countries

Although MDs affect people from all groups of society, the poor remain excessively affected with more than 80% of the burden coming from low- and middle-income countries (LMICs) where 85% of the world's population resides (Javed *et al*., 2021). It is believed that low socio-economic status, poverty, younger population demographics, internal migration, rapid urbanization, lifestyle changes and discrimination within population subgroups are amongst the drivers of the high mental health burden in these countries (Freeman, 2022; Javed *et al*., 2021; Rathod *et al*., 2017). South Africa is one of 153 LCIMs, in the upper middle-income group with a total population of 60.6 million as of end of June 2022 (Stats SA, 2022). Pre-Covid 19 data presented by the South African College of Applied Psychology suggested that one in six South Africans suffers from anxiety, depression or a substance use disorder, 60% could be suffering from post-traumatic stress, 41% of pregnant women are depressed and 40% of HIV positive people also suffer from a mental disorder (SACAP, 2019). Country-specific data from the GBD 2019 further highlighted the critical issue of mental illnesses in SA. It was reported that South Africa had 1684,3 thousand people suffering from major depressive disorder and 2150,5 anxiety disorders in 2019 (GBD 2019 Collaborators, 2022). This was during the pre- Covid 19 era. An article released from SADAG (2022) however estimates that currently, after covid 19, 1 in every 5 people in SA will, or do, suffer from a mental illness. Another recent study revealed that South Africans suffer higher rates of probable depression and anxiety with depression prevalence across its provinces ranging from 14.7 in the Eastern Cape to 38.8% in the Northern Cape and anxiety prevalence from 8.6% in KwaZulu Natal to 29.3% also in the Northern Cape (Craig *et al.,* 2022). In this study, the prevalence of depression and anxiety in the Western Cape was 31.8% and 23.9% respectively.

Despite the huge burden of MDs, mental health has not achieved appropriate focus, policy, or funding but remains a neglected area and insignificant part of the health sector particularly in LMICs (Nguse and Wassenaar, 2021; Pillay, 2019; SACAP, 2019; Shumet *et al*., 2019). Health

systems are inadequately responsive to their diagnosis, treatment, and prevention with minimal to even non-existent budgets for prevention and promotion. Countries run on a limited budget which is allocated to many competing sectors such as education, national security, poverty alleviation, job creation and nutrition making it more difficult to invest more in mental health without careful planning and evidence-based perceptions (Pillay, 2019). Insufficient funding results in gross shortages of professionals and drug supplies which fuels stigmatization. The absolute difference between the true prevalence of a disorder and the treated proportion of affected individual is known as the treatment gap and this is over 50% in all LCIMs with the least resourced countries getting up to 90% (Freeman, 2022). The scarce resources are often inefficiently used and inequitably distributed.

Data from a national survey to quantify public expenditure on mental health and evaluate the constraints of the South African mental health system suggests that South Africa allocates around 5% of its health budget to mental health, with provincial mental expenditure ranging from 2.1 to 7.7% of the total health budget and only 8% of this mental health budget is spent within the primary healthcare sector (Docrat *et al*., 2019). They also estimated a resulting treatment gap of 92% for mental disorders, epilepsy, and intellectual disability in SA. As a result, it's not shocking that the majority of the people with MIs remain undiagnosed and untreated. Lack of any form of quality and affordable mental health care results in a vicious cycle of widespread human rights violation, discrimination and stigma frequently leading to suicide (Javed *et al*., 2021; Pillay *et al*., 2019; Rathod *et al*., 2017). The fact that only less than 10% people living with mental conditions receive the care and treatment they need is an indication of how mental illness has been neglected by the health system. Mental health resources and services should therefore be scaled up and fully integrated as a component of universal health coverage at both community and primary care levels because allocating more resources to treatment at the expense of social determinants or vice versa might widen rather

than narrow the treatment gap (Freeman, 2022). In an article, The Deputy Director General of Communicable and Non-communicable Diseases at the National Health Department (Pillay, 20221) admitted that the department still had more to do ensure efficient, affordable, and quality mental health services. However, he also highlighted some of the work that had been achieved towards this goal such as establishing provincial review boards, trained more than 900 doctors and nurses working in primary health care and district hospital levels in the treatment of acute psychiatric conditions and provided funding to the South African Federation for Mental Health to support advocacy on mental health.

2.3 Knowledge Regarding Mental Health

"Healthy People" objectives are set goals set by the US as a national effort to improve the health and well-being of US citizens. The latest Healthy People 2030 edition addressed personal and organizational health literacy and defines them as follows: "*the degree to which individuals have the ability to find, understand, and use information and services to inform health-related decisions and actions for themselves and others.*" (US HHS, 2020:1). Undeniably, it is crucial that people are able to access, comprehend, accept, and apply knowledge for them to follow any instructions (Hermans *et al*., 2021). Likewise, people have to be sufficiently health literate to be able to understand their personal as well as the external environment's role towards a good wellbeing. Improving health literacy helps improve the quality of life of individuals. People with poor health were less likely to use disease prevention services (Gautam *et al*., 2021) and less able to successfully manage chronic diseases (Nesrin *et al*., 2021; Samoil *et al*., 2021). In their review, Nutbeam and Lloyd (2021) highlighted that literacy is an intricate concept which is not a fixed asset but can be improved through education and is specific to both content and context.

The recognition of mental health in the Sustainable Development Goals (SDGs) represented a

global shared commitment to include it in universal coverage and making it an area of priority investment. Because mental disorders are rather complex, a single approach alone cannot fully make an effective impact on mental health but requires a comprehensive and integrated approach which requires different sectors to act together. Like in health literacy, lack of awareness and knowledge of the value of mental health in social and economic development is detrimental. The term "Mental health literacy" (MHL) was first introduced by Jorm and colleagues (1997) as "*the knowledge and beliefs about mental disorders which aid their recognition, management, or prevention*" (p.182). This was later expanded to include the ability to provide support to someone suffering with a mental health problem (Jorm, 2012). Undisputedly, this concept positively impacted the development of many policies and an important target for prevention and intervention efforts.

Improving MHL can promote mental health at the individual and public levels (Lai *et al*, 2022). It is believed that how an individual understands and explains MDs directly influences aspects related to their help-seeking behavior such as choice of treatment, compliance, and their attitudes towards those suffering from mental health disorders (Furnham and Swami, 2018; Javed *et al*., 2022; Lopez *et al*., 2018). According to Ham and colleagues (2011), lack of knowledge and awareness of mental illnesses such as depression strongly influence the attitude of its severity and identification of symptoms. The ability to recognize a mental illness has important implications as it can aid in timely and appropriate help-seeking, and ultimately improve outcomes for people with mental illness (Picco, 2018). In addition to understanding about symptom recognition, comprehensive mental health literacy should also include knowledge about mental health treatment services and where to seek help (Wang *et al*., 2019). These efforts are valuable to reduce stigmatization and improving negative attitudes towards people suffering from MDs, which have both been linked to poor MHL (Berger, 2018; Wang *et al*., 2019).

Many studies assessing MHL of populations at different levels have been done, such as national, institutional, or geographic levels (Aluh *et al*., 2019; Arafat *et al*., 2019; Crabb *et al*., 2019; Miles *et al*., 2020; Thai *et al*., 2020). Depression and schizophrenia are definitely the two most studied MDs and typically the respondents are presented with case vignettes where they have to correctly identify the disorders, their possible causes and treatments (Park *et al*., 2018; Furnham and Swami, 2018). However, when researchers examined MHL, they have typically found the general public has a poor understanding of mental health which impedes their help-seeking behavior and treatment compliance (Hess *et al*., 2004; Swarts *et al*., 2010; Aluh *et al*., 2019). Aluh and colleagues (2018) examined the mental health literacy of 285 Nigerian high school students and only 4.8% (n = 13) of the participants correctly identified and labeled the depression vignette on the questionnaire. Crabb and colleagues (2019) reported that there is poor understanding of mental health and mental illness in Africa. In a recent study (Renwick *et al*., 2022), a review of the results from 52 separate studies (from July 2020) comprising of 36 429 children and young people in low- and middle-income countries showed that low levels of mental health literacy, pervasive levels of stigma and low confidence in seeking professional healthcare services. From this perspective, it is important that there is a need for implementation of innovative, evidence-based mental health awareness programs and interventions to enhance the level of mental health literacy.

2.4 Stigma and Attitudes toward Mental Diseases

Kiriakidis (2015) defined attitude as a tendency to respond to something in a positive or hostile (negative) way. Although not directly visible, attitude causes positive and negative behavior and directs choices. According to Ajzen (2011), attitude is also formed through experience which can be gained through family interaction, social environment, and education. Stigma is an important public health issue which refers to an act of distinguishing, bringing shame,

disgrace, or disapproval towards an individual with certain undesirable characteristics causing them to be rejected or discriminated against from society and difficult to treat (Cook and Wang, 2010; Goffman, 2009; Nohr *et al*., 2021). It is a form of negative judgement involving problems with knowledge, attitude, and behavior (Conceicao *et al*., 2020; Nohr *et al*., 2021). Stigma can impede access at different levels such as individual, community or institutional levels (Henderson *et al*., 2013). Public stigma is when society gives negative labels to mental illness whilst personal stigma is when an individual accepts the negative stereotypes and identifies with the mentally ill (Nohr *et al*., 2021).

The stigma attached to mental illness is one of the greatest obstacles interfering with the quality-of-life improvement of the mentally ill and their families. People with mental illnesses face several factors such as cultural and religious beliefs, stigmatization as well as myths which threaten to derail their ability to seek medical help (Abuhammad and Al-Natour, 2021; Mulango *et al*., 2018; Zhu *et al*., 2019). Negative stereotypes by the public and media which portray mentally ill people as violent, dangerous, dependent, not fit to get married, psychologically unstable, and unfit to work are some of the challenges that these people have to face from the society in which they live (Berger, 2018; Lien and Kao, 2019; Nersessova *et al*., 2019; Weberman and Brand, 2017).

Moreover, stigma can also originate from the professionals in the mental health field who are expected to offer help to the mentally ill. Negative attitudes of mental health professionals towards people with a mental illness create a barrier to obtaining treatment services and tackling mental health illiteracy (Colman *et al*., 2021). A study investigating nurses' knowledge, attitudes, and practices regarding depression in Cameroon found that the majority (92.9%) knew depression needs medical intervention (Mulango *et al*., 2018). However, 66% felt uncomfortable working with depressed patients, only 1.8% knew a standard tool used to

diagnose depression and 45.1% did not know if psychotropic drugs were available at pharmacies within their health area with only 15.2% reporting to have prescribed these. Yao and colleagues (2020) projected that people with mental disorders were likely to be exposed to more barriers of treatment should they contract COVID19 highlighting discrimination associated their condition in health-care settings as one of the major reasons why. In general, social stigma increased during the COVID-19 pandemic as people from certain populations (Indian north-east) were targeted as being the reason for the global outbreak which it made people hide their illness and not seek health care immediately fueling the spread of the virus (WHO, 2020). Nutbeam and Lloyd (2021) suggested that amongst other things, future health literacy interventions should also focus on improving frontline professional skills and support as this improves the quality of health communication that reaches different populations.

Lack of knowledge in addition to subtle negative attitudes toward people with MIs by health professionals is disconcerting considering that they are widely regarded as the best equipped to address MDs at primary care level (Nutbeam and Llyod, 2020; Mulango *et al*., 2018; Riffel and Chen, 2019). Therefore, there is a crucial need to provide training not only among the general public but among primary health care workers too to ameliorate early diagnosis, patient participation, and appropriate treatment for better management of mental illnesses.

2.5 Beliefs and Help-Seeking Preferences

Less than 25% of the population of individuals with depression seek professional help but they rather depend on informal assistance e.g., friends, traditional and religious healers (Menberu *et al*., 2018). Lack of knowledge, poor quality of care, discrimination, scarcity of resources and insufficient health workers are amongst some of the researched barriers to utilization of formal mental health services for treatment especially in developing countries (Adams and Young, 2021; Lu *et al*., 2021; Sarikhani *et al*., 2021)

As highlighted earlier, most people hold stigmatising beliefs and attitudes about depression (Griffith *et al*., 2008) and have understood depressive symptoms as being less serious and not requiring treatment therefore do not seek professional help (Aluh *et al*., 2018; Shumet *et al*, 2019). Some of the most significant personal barriers to seeking help for mental health issues were found to be lack of knowledge, poor quality of care, perceived stigma, embarrassment, problems in symptom identification and preference for self-reliance (Adams and Young, 2021; Sarikhani *et al*., 2021); Wei, *et al*, 2015, Shumet *et al*., 2019).

There are great disparities not only in mental health literacy but also help-seeking preferences between high-income and low-income settings. In a more recent study to explore the cultural beliefs of mental health care users and caregivers regarding help-seeking behaviour in the rural communities of the Limpopo Province, South Africa, the factors found to influence help-seeking behaviour amongst the participants included lack of knowledge, traditional beliefs, stigma, and side effects of antipsychotic medication (Bila and Carbonatto, 2022). In an older study, the most common source of recommended help for the Australian adolescents in Burns and Rapee's (2006) study was the use of formal counselling i.e., 90% of 202 participants. However, 12 years later, Aluh and colleagues (2018) did the same study on Nigerian adolescents with contrasting findings as only 1.5% (4 from 277) respondents from the study recommended professional help from a psychiatrist or psychologist. These findings reflected the access and familiarity that Australian adolescents had to formal professional help (school counsellors, psychiatrists, and psychologists). In contrast, severe shortages of mental health professionals in Nigeria and many other African countries limit accessibility to mental healthcare among the students (Aluh *et al*., 2018). According to findings from a UNICEF South Africa U-Report poll, 65% of young people stated that they had some form of a mental health

issue but did not seek help. Over 25% did not see the seriousness of the MD to seek support, 20% lacked knowledge of where to seek treatment and 18% were afraid of stigma from other people (UNICEF, 2021).

Many people's decision not to get treatment for depression or other mental illnesses stems from their beliefs that usually arise from common myths and cultural legends or traditions which contain very little factual information (Rathod *et al*., 2017). These vary among individuals, families, ethnicities, cultures, and countries. Cultural and religious teachings often influence beliefs about the origins and nature of mental illness, and shape attitudes towards the mentally ill. Most Africans perceive any illness or misfortune as a result of external causes and forces which are caused by human, supernatural and ancestral spirit agents (Colman *et al*., 2021; Peter *et al*., 2021). In South Africa, mental illness was referred to as witchcraft (uvuloyi) and traditional and religious healers were the first preference resort to getting help and "Western" forms of care usually considered last (Bila and Carbonatto, 2022). Because of this belief, many families seek care from African traditional healers (sangomas) before they visit the clinics. It is therefore vital to assess the knowledge gaps and erroneous beliefs concerning mental health issues to allow for improvement of MHL and other interventions that promote professional help-seeking behaviours. The stigma around mental health therefore complicates having faith in therapeutic interventions but normalises seeking help from representatives that normalize their experiences (Rathod *et al*., 2017). This presents a huge challenge that non-evidence-based interventions are preferred and very popular as compared to evidence-based treatments. Global calls therefore encourage the use of collaborative approaches that modifies evidence-based treatment or interventions with wider communities that also makes use of these preferred language, culture (e.g., traditional, and religious healers) and context to be adapted to LMICs

to make them more user-friendly and acceptable whilst improving mental health outcomes (Rathod *et al*., 2020; WHO, 2022a).

2.6 Depression

Depression is a common mental disorder, which affected approximately 280 million people in 2019 globally including 23 million children and adolescents (WHO, 2022b). From the 3.8% of the population living with depression, 5.0% are among adults and 5.7% among those older than 60 years (WHO, 2021a). Its symptoms include persistent sadness, feelings of guilt, low self-worth, sleeping and eating disorders, poor concentration, and usually multiple physical complaints (SADAG, 2022; WHO, 2022b). Depression results from complex interactions of biological, psychological, and social factors e.g., poverty, abuse, divorce, stigma, lack of knowledge and trained health personnel (SADAG, 2022; WHO, 2021a; WHO, 2022b). A strong link has been established between depression and most non-communicable and chronic diseases e.g., cancer, cardiovascular disease, and diabetes (Almanzar, 2014; WHO, 2021a).

Depression literacy is the knowledge of depression (signs, symptoms, diagnosis, treatment) and attitudes about seeking help (Hart *et al*., 2014). Nigam and colleagues (2013) reported good depression knowledge in a group of 580 adolescents from India. Although depression is the most treatable mental disorder with treatment ranging from prescribed antidepressant medication, psychotherapy and other e.g., electroconvulsive therapy (SADAG, 2022); fewer than half of those affected in the world receive the care and support they need (Aluh *et al*., 2018; SADAG, 2022; WHO, 2021a). Depressed individuals have low levels of professional help-seeking behavior but rather seek informal help e.g., from friends, traditional healers, and family (Bila and Carbonatto, 2022; Menberu *et al*., 2018).

2.6.1 Depression Prevalence

The WHO Global Health Estimates in 2017 highlighted depression as the leading cause of morbidity and mortality accounting for 7.5% of total years lived with disability (YLDs) globally (WHO, 2017). It estimated that there were 350 million people living with depression globally and portrayed a global increase in the prevalence of depression from 2005 to 2017 (see Table 2.1). The recent Global Burden of Disease (GBD) Study in 2019 showed that the 2 most disabling mental disorders were depressive, and anxiety disorders whose prevalence in 2019 where 279,6 million and 301,4 million respectively, ranking among the top 25 leading causes of burden globally (GBD 2019 Collaborators, 2022). As part of the GBD 2020 currently being researched, data from a study to quantify the impact of COVID-19 on the prevalence and burden of major depressive disorders and anxiety disorders in 2020 have been presented (COVID-19 Mental Disorders Collaborators; 2020). They found that before adjustment for the COVID-19 pandemic, the estimated global prevalence of major depressive disorder in 2020 was 193 million people but increased by 27.6% to 246 million people after adjustment due to the effects of COVID-19. Depressive disorder accounted for the largest proportion of mental disorder disability-adjusted life years (DALYs) in 2019 i.e., 37,3% (GBD 2019 Collaborators, 2022).

Depression levels are higher in under- and developing regions of the world as compared to developed regions (GBD 2019 Collaborators, 2022). This is not surprising considering that screening and treatment for depression and other mental health diseases are restricted in SSA due to various reasons that include limited resources (Mulango *et al*., 2018). By 2030, it is predicted that depression will be the third and second highest cause of disease burden in LMICs and middle-income countries, respectively (Rathod *et al*., 2017). Another important highlight from the results of the GBDs is that more females suffer from depression as compared to their male counterparts (GBD 2019 Collaborators, 2022). According to country-specific data from

the GBD 2019, the prevalence of major depressive disorders in South Africa was 1684,3 thousand and was the second most common mental disorder following anxiety disorders (GBD 2019 Collaborators, 2022).

Table 2.2: Summary of prevalent cases in thousands by mental disorder in South Africa in 2019

Mental Disorder	Prevalent Cases in Thousands
Schizophrenia	131·5
Major depressive disorder	1684·3
Dysthymia	766·7
Bipolar disorder	320·8
Anxiety disorders	2150·5
Anorexia nervosa	27·8
Bulimia nervosa	75·2
Autism spectrum disorders	209·7

[Source: GBD 2019 Collaborators, 2022]

2.6.2 Depression in Young People

Depression is one of the leading causes of health-related disability amongst young people globally (WHO, 2021b). Close to 50% of mental disorders begin by the age of 14 years, and 75% by the age of 24 years (Kessler *et al*., 2007; WHO, 2021b). It often starts at a young age, progressing to long-lasting or recurrent episodes which can lead to suicide (WHO, 2021a; WHO, 2021c). It is estimated that 2.8% of young people aged 15-19 suffer from depression (WHO, 2021b). Compared to adult-onset, depression in young people has a higher recurrence and poorer outcomes (Wilson *et al*., 2015). Modern higher education institutions mostly

comprise of adolescents moving towards young adulthood (Makhubela, 2021). For the purpose of this study, the term "young adults" is used to refer to university students aged 18-24 years of age.

It is during childhood and adolescence that young people develop to self-sufficiency, discipline, social interaction, and learning. This is a very critical and important stage as these skills directly influence their mental health for the rest of their lives (Words to Action, 2018). The prevalence and severity of MDs, especially depression, in college students continues to increase globally (Rita *et al*., 2018; Gebreegziabher *et al*., 2019). Ibrahim and Abdelreheem (2015) observed significant distress among medical and pharmaceutical students with depression prevalence of 57.9% and 51.1% respectively. Out of a sample of 768 Ethiopian college students, 58.4% were found to have current common mental disorders showing a high prevalence (Gebreegziabher *et al*., 2019). Depression in young adults at universities impacts on the individual and society at large as it amplifies the risk of anxiety disorders, social dysfunction, substance abuse and underachievement (Hess, 2004; Wei *et al*., 2015; Rita *et al*., 2018). Both depressive and anxiety disorders can affect one's functionality e.g., the ability to learn or attend school and can cause social withdrawal leading to loneliness.

Depression is also among the leading causes of death by suicide which is the leading cause of death in young people (15–29-year-olds) in Europe (WHO, 2021c). Suicide is one of the most tragic consequences of depression especially in young people and was the fourth leading cause of death among 15–29-year-olds globally in 2019 (WHO, 2021c). SADAG reported that in SA, 9.5% of all teen deaths are due to suicide (SADAG, 2022). It has been found that depression and suicide are common and excessively affect university students compared to the general public (Bantjes *et al*., 2019; Ibrahim *et al*., 2013Pillay *et al*., 2020). The past few years has seen unparalleled incidents of suicide acts and attempts among university students in SA

(van Zyl *et al*., 2017). There have been many incidents of reported suicides by students from different universities in South Africa from the pre- Covid error 2017 to the post- Covid 19 period (Etheridge, 2018; Zamayirha, 2018; Makgatho, 2021; Ncwane, 2022; Nefdt, 2022; McCain and Evans, 2022).

Zozulya (2016) found that in a sample of 161 first year students from UWC, 26% had suicidal ideations. Findings from a study in South Africa by Bantjes *et al*. (2019) confirm that out of 1402 first year South African students, 46.4% had suicidal ideations, 26.5% planned suicide, and 8.6% attempted suicide. Suicide ideation is exacerbated by risk factors such as a stressful university life often compounded by broken relationships, loss of loved ones, family mental health history, and feelings of failure which generally (Pillay, 2020). The increasing tragic events associated with mental health issues on campuses have led some experts to suggest that we may be undergoing a mental illness epidemic among university students (Makhubela, 2021).

The rise in the prevalence of young people suffering from mental disorders and their effects raises an urgent concern and need for early and timely identification, effective prevention and optimal care for students suffering from depression and any other mental illness. Policy makers and educational organisations need to act swiftly and boldly to establish intervention programs that ensure adequate resources for the prevention, management and support of young people suffering from mental disorders. Universities must include in their curriculums education and awareness surrounding this topic and suicide prevention. A good example is The Adolescent Depression Awareness Program (ADAP), a school-based, universal program which was initiated to educate students about mood disorders i.e., increase ‘‘depression literacy’’ while reducing mental health stigma and has been a used in many interventions producing good results (Hess *et al*., 2004; Hart *et al*., 2014). Another approach focused on reducing suicide

could be to identify and treat common disorders. In their study to quantify potential reduction in suicidal behaviour among first year students using this approach, Bantjes and team (2021) found that treating common mental disorders early in university careers could yield absolute reductions in suicide ideation, plan, and attempt by 17%, 55% and 73.8% respectively- an evidence-based intervention which can be explored. Many college/university campuses now offer mental health counseling and treatment services, support groups and 24-hour helplines (Amarasuriya *et al*., 2018). The Centre for Student Support Services (CSSS) at UWC has an office for Therapeutic Services registered with the Health Professions Council of South Africa (HPCSA), that provides counselling interventions aimed towards restoring and/or enhancing academic functioning of registered students (CSSS, 2022). They offer short-term and solution-focused counselling interventions that address multiple layers of psychosocial traumas or challenges that impair optimal academic functioning. In addition, they provide group counselling interventions, psycho-educational workshops, mental health awareness talks and campaigns that includes both students and staff. Sadly, many students are still passive in seeking help from such services (Limone and Toto, 2022). In a report by the CSSS, the office for Therapeutic Services had a student reach of 568 while the SADAG had 3825 for January to September 2022 (Adams, 2022). The majority of students who accessed CSSS were female (75.6%), also first – and 4th -year students. There was a drastic increase in online engagements as a result of the Covid-19 pandemic. The predominant presenting problems were depression (26%) and anxiety (19%).

2.6.3 Factors Associated with Mental Disorders in Young People

Mental disorders are influenced by a range of factors, which are extensive and complicated. The mental well-being of any individual is the unique result of social and environmental factors interacting with genetic, neurodevelopmental, and psychological processes (Patel *et al*., 2018).

Students are faced with a myriad of challenges which trigger depression such as poverty, inequalities, high levels of crime and violence, changes in support structures, high academic demands, unresolved traumatic events, and complexities of modern social media (Bantjes *et al*., 2020; Hess *et al*., 2004; Ibrahim and Abdelreheem, 2015; Kessler *et al*., 2007;). Untreated mental health problems and disorders are strong predictors of family dysfunction, reduced life expectancies, poor achievements, social problems, substance abuse and associated medical conditions such as diabetes and cancer (Wei, 2015; Gebreegziabher *et al*., 2019). The Manager for Therapeutic Services at UWC, Roné Gerber, reported that apart from depression and anxiety being the predominant presenting problems of students who accessed CSSS services from January – September 2022, family relationship problems (13%), academic concerns (6%), bereavement (6%) and different psychosocial and economic factors contributed to a significant stressor in the development of their mental health issues (Adams, 2022). Without assistance, most young people find themselves in desperate positions, where they see no way out and opt to end their lives.

2.7 Mental Health during the COVID-19 Pandemic

The emergence of the novel Corona Virus Disease (COVID-19) in China in December 2019 led to a global pandemic causing over 5 million deaths in 2 years (Aluh, 2019; WHO, 2022c). In addition to devastating effects on human health and mortality rates, COVID-19 brought with it many other challenges such as job losses, economic impacts, affected relationships and disrupted social structures which are still visible in societies (Roy *et al*., 2020; Gittings *et al*., 2021). According to the findings of a WHO survey on 130 countries, the COVID-19 pandemic stopped critical mental health services in 93% of countries while the demand for these services is increasing (WHO, 2020). Furthermore, 72% countries reported disruptions to mental health services for children and adolescents with 78% reporting at least partial disruptions to school mental health services. It was expected that people may experience increased stress during this

pandemic that could be overwhelming and cause strong emotions that destabilize one's mental health (Holmes *et al*., 2020; Marmaya *et al*., 2021). Data showed that the prevalence of major depressive disorders globally in 2020 increased by 27.6% due to COVID-19 (COVID-19 Mental Disorders Collaborators; 2020).

The factors reported to have led to serious mental illness include the loss of loved ones, persistence of new virus variants, job, or income losses as well as ongoing financial distress and family issues arising from long isolation (Gittings *et al*., 2021; Marmaya, 2021). Mandates like national lockdowns, staying at home, closure of schools, and other social facilities affected life patterns and impacted physical and mental health concerns such as anxiety and depression (De Man *et al*., 2022; Li *et al*., 2020; Roy *et al*., 2020; WHO, 2022c). SADAG's online survey findings on covid-19 and mental health reported that out of 1200 participants of an online survey on mental health during lockdown, 55% experienced anxiety and panic, 40% depression, 30% poor family relations, 12% had feelings of suicide, 6% succumbed to substance abuse and 46% had financial stress and pressure (SADAG, 2020). Another study of South African adolescents and young people to explore and document their experiences, challenges, and coping strategies during the national lockdown revealed severe emotional impacts from immediate COVID-19 related shocks and uncertainties about the future with several participants disclosing depression and inability to cope (Gittings *et al*., 2021).

Apart from substantial increases in anxiety and depression, the pandemic also uncovered and exacerbated other pre-existing toxic social norms and inequalities in many countries including SA (Docrat *et al*., 2019; Mahlangu *et al*., 2022). These include increases in substance use, domestic violence and child abuse, divorce, poverty, unemployment and racial or social inequalities (Gittings *et al*., 2021; Mahlangu *et al*., 2022; Roy *et al*., 2020, WHO, 2020). It was reported that more than 243 million women between 15 to 49 years of age had been sexually or physically abused by an intimate partner at a time when half of the world was in lockdown

(UN Women, 2020). Likewise, the pandemic worsened the risk factors on violence against women and children in the South African homes (Mahlangu *et al*., 2022).

COVID-19 resulted in devastating hardships that are still shaping the physical and mental health of many populations including South Africans (De Man *et al*., 2022; Docrat *et al*., 2019). However, the outbreak also brought an opportunity to identify the strengths and weaknesses of our healthcare systems, amplified the existing mental health gap and revealed the urgency to rethink old ideas about how we can integrate better services especially for mental healthcare.

2.8 Conclusion

Despite the lack of investment in resources and mental healthcare professionals, the gap between mental health burden and treatment can be alleviated by increasing mental health literacy and changing personal perceptions which has been shown to be linked to more favourable help-seeking behaviours. Mental health awareness programmes in universities are critical and should be used as interventions that mold young people's opinions about mental health matters and efficient help-seeking preferences. This knowledge has the potential to infiltrate the community more broadly.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This chapter outlines the methods used to conduct this study. It describes the research design and setting, study population, data collection technique and analysis. The purpose of the study was to determine the knowledge, attitudes, and help-seeking preferences of undergraduate students at UWC. A quantitative approach was used as detailed in this chapter.

3.2 Aims and Objectives

Aim:

To determine the knowledge, attitudes, and help-seeking preferences of depression in undergraduate students at the University of the Western Cape.

Objectives:

- To determine depression literacy in undergraduate students
- To describe the attitudes of undergraduate students towards depression
- To determine the help-seeking behaviours of undergraduate students for depression
- To determine the association between attitude with depression literacy; attitude with help-seeking behaviour and depression literacy with help seeking behaviour
- To investigate the impact of the COVID-19 pandemic on perceived mental health care needs of undergraduate students

3.3 Research Design

According to McCombes (2019), a research design is a framework one develops to answer a research question and describes things such as the type of data to be collected, location, timescale, variables, hypotheses, participants, and data collection methods. This study employed a descriptive quantitative research design using a cross-sectional survey. A descriptive quantitative research design aims to describe a population, phenomenon, or situation precisely and systematically, establishing only associations between variables not causality through observations without manipulation (Siedlecki, 2020; McCombes, 2019). Amarasuriya *et al.*, 2018 and Aluh *et al.*, 2018 used a similar study design in another comparable research.

3.4 Research Setting

The study setting was the University of the Western Cape (UWC) situated in Bellville, a Northern suburb of Cape Town in the Western Cape province of South Africa. The university

has 7 faculties namely: Arts, Community and Health Sciences, Dentistry, Economic and Management Sciences, Education, Law, and Natural Science. It provides over 200-degree, diploma, and certificate programmes towards undergraduate and postgraduate studies (UWC, 2021). According to the Deputy Registrar, there was a total of 27 300 students enrolled at the university in the 2019 academic year.

3.5 Study Population

As was stated by the Deputy Registrar, the study population was 18392 undergraduate students enrolled for the 2019 academic year.

3.6 Sample Size (Selection criteria)

It was estimated that approximately two-thirds (2/3) of the 18392 undergraduates are enrolled in a 3-year program. The sampling frame was thus 12262 undergraduate students. The sampling size was calculated using an online sample size calculator (www.surveysystem.com/sscalc.htm). This was 373 undergraduate students. With an extra 10% to negate a poor response rate, a total sample size of 410 undergraduate students was selected for this study.

3.7 Data Collection

The data collection method was a self-administered online structured questionnaire that had predetermined response options (Langhaug *et al*, 2010) (Appendix A). The entirety of the questionnaire was administered via the free Google Forms survey tool (https://docs.google.com). Google Forms has features and tools which make collection and tallying of data easier and more efficient. An email that detailed the purpose of the study

(information sheet) with an invitation to take part and a link to the questionnaire on Google Forms was sent out to the students through the "UWC Communications" team (Appendix B). Participants were required to consent to taking part in the study by ticking on the boxes of the online consent form (Appendix B). Data collected from participants was collected on a spreadsheet using the Sheets (Excel) function on Google Forms to automatically record the answers. All data was stored on Google Drive. The spreadsheet populated with responses as more participants responded in real-time. Up to three reminder emails were sent to the students at one-week intervals.

The questionnaire tool had five sections. Apart from the demography section, four questionnaires were used to develop the tool. These questionnaires were adopted and had been validated from previous studies (referenced below).

- Demographic questionnaire which collects socio-demographic information relating to the participant e.g., age, gender, and faculty (Nigam, *et al*., 2013).
- Adolescent Depression Knowledge Questionnaire (ADKQ) which assessed knowledge of depression (Hess *et al*, 2004; Swartz *et al*., 2010). This section comprised of 10 questions which expanded from number 8 through 17 with dichotomous "yes/no" questions designed to test factual knowledge about depression.
- Depression Stigma Scale (DSS) that measured the respondent's own attitudes to depression (Griffiths, 2019 and Zhu *et al*., 2019). The original DSS includes two 9-item subscales assumed to measure personal depression stigma (i.e., personal perceptions of depression) and perceived depression stigma (i.e., perceptions of how others perceive depression). However, for this study only their personal depression stigma was explored. This subscale comprised of nine items measuring the extent to which each participant personally agreed or disagreed with a statement about depression (e.g., 'if I

had depression, I would not tell anyone'). Each item was answered on a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree). The total score of the subscale ranged from 0 to 36, with higher scores indicating greater stigma. The DSS has been reported to have previously demonstrated sufficiently good internal consistency and test-retest reliability (Zhu *et al*., 2019).

- General Help Seeking Questionnaire (GHSQ) (Tuliao and Velasquez, 2014; Olivaria and Guzmán-González, 2017). Besides evaluating the intention to seek help from professionals, this instrument allows assessing the intention to seek help from informal sources. According to Tulio Velasquez (2014), adolescents would prefer informal sources when faced with a mental health problem, so it is useful for the instrument used to identify the support figures favoured by the participants. This part asked participants to rate, using a 5-point Likert scale ranging from "Extremely Unlikely" to "Extremely Likely," the possibility of seeking help among eight professional (e.g., general practitioner or mental health professional) and lay (e.g., parents and friends) possible sources. The item, "I would not seek help from anyone," as well as an item asking for other possible sources of psychological help were also added.

- Perceived mental healthcare needs during the Covid-19 pandemic questionnaire (Roy *et al*, 2020). This was assessed by four items on a 3-point Likert scale ranging from yes, maybe and no.

The complete questionnaire took no longer than 15 minutes to complete in one sitting and only completed questionnaires could be recorded.

3.8 Reliability and Validity

The researcher checked every data element for any errors e.g., missing information. To reduce recall bias, the research questions were selected carefully, and the appropriate data collection method was chosen and implemented. All the adopted questionnaires: ADKQ (Hess *et al*, 2004), DSS (Griffiths, 2019), GHSQ (Wilson *et al*., 2005) and the perceived mental healthcare needs during the Covid-19 pandemic (Roy *et al*, 2020) were validated for data collection of data and demonstrated sufficiently good internal consistency in those previous studies. However, in this study, Cronbach's Alpha (α) coefficients were used to test the research instrument for reliability. It measures internal consistencies on how closely related the items of a set group are (Bujahang *et al*., 2018). A high Cronbach's Alpha value means high level of internal consistence. Reliability was measured using IBM® SPSS® Statistics Version 27 (2020) and the results are presented in Table 3.1.

Table 3.1: Reliability statistics results

	Cronbach's α	Cronbach's α Based on Standardized Items	N of Items
Depression knowledge	.756	.777	10
Personal perceptions of depression	.708	.719	9
General help seeking	.703	.709	9
Perceived mental healthcare needs during Covid-19	.724	.758	4

Table 3.1 results show a high Cronbach's alpha coefficient values which are all above 0.70, meaning that the questionnaire was well structured and reliable; hence meaningful responses can be obtained (Bujahang *et al*., 2018).

3.9 Data Analysis

Upon completion, captured responses on Google Forms were exported onto a Microsoft Excel for easy storage and access for analysis. Data was uploaded from Microsoft Excel onto the

Statistical Package for Social Science (SPSS) i.e., IBM® SPSS® Statistics Version 27 (2020) where all data analysis was carried out.

Descriptive statistics have been used in the study to analyse the findings. The socio-demographic characteristics of the participants were described by frequency and percentages and summarized into a table. Categorical variables such as depression knowledge, attitudes and help-seeking preferences were coded for conversion into numerical data for analysis. Frequency and percentages were then also used to describe this data (Amarasuriya *et al*., 2018; Thai *et al*., 2020; Nigam *et al*., 2013). Mean and standard deviation was calculated from the responses to the questionnaire subscales (Zhu *et al*., 2019; Olivaria and Guzmán-González, 2017).

A Chi-squared test was employed to assess if there was a statistically significant association between categorical variables: gender and general help-seeking preferences, as well as individual perceptions of depression and general-help seeking among UWC undergraduate students. A p-value of <0.05 was considered statistically significant. Both univariate and multivariate logistic regression analyses were conducted to analyse associations between measured variables. Specifically, multiple logistic regression was employed in examining if there is significant association between depression knowledge and each of the demographic variables. A multivariate logistic regression was utilized to determine whether there is a significant relationship between the dependent variable, knowledge of depression, and the independent variables: attitude towards depression, and general help-seeking preference. The strength of association was evaluated using odds ratios (OR) and adjusted OR with a 95% confidence interval (CI) and a significance level set at 5% ($p < 0.05$).

3.10 Ethics

Ethics approval was sought through application from the Biomedical Research Ethics Committee (BMREC), UWC. Upon receiving ethical clearance from the BMREC (Appendix C) and following the university policy on conducting research involving students and data, an online application to the Deputy Registrar was made through the UWC student portal (Screenshot attached in Appendix D). Permission from the Registrar allowed the researcher to proceed with data collection for the study.

An invitation to participate in the survey was sent out as emails through the University mailing system to all the students and coordinated by the UWC Communications team. The email contained a Participant Information Sheet with information about the researcher, aims and purpose of the study (Participants Information Sheet- Appendix B). The information sheet explained the structure of the questionnaire and expected time it should take to complete. It also highlighted that the research was confidential, their participation was voluntarily thus they can withdraw at any time during the study and no costs will be incurred by participating. Consent was required from and provided by the participants using a ticking on the boxes of the online consent form (Structure attached on Appendix B). Confidentiality and anonymity were ensured as no personal identifying information e.g., name or student number was collected. All responses were kept on a safe external drive protected by a password known only to the researcher and on the researcher's cloud (online) account also protected by the researcher's log in details. All data will be destroyed after two years from the final mini-thesis approval.

Because all human interactions and talking about self or others carry some level of risks, the researcher minimized psychological risks by making a referral to the Therapeutic Services Team (full time psychologists) at the Centre for Student Support Services, UWC for further assistance or intervention. The psychologists provide professional, confidential, free counselling and psychological services to all registered students.

3.11 Study Limitations

The major limiting factor for this study was the Covid-19 pandemic which started in December 2019 and spread around the world from Wuhan (WHO, 2020). The state of lock-down in South Africa like many parts of the world led to the halting of services and products. This led to most company employees working from home and UWC, like many educational institutions, was shut down. The uncertainty and postponement of education, the fear of contracting the virus and the loss of family and friends became a great stressor (Roy *et al*., 2020). This delayed the progress of the project. Furthermore, as this was an online study, only participants with access to the internet at home could participate in the study which resulted in less students participating as was initially expected.

CHAPTER 4: RESULTS

4.1 Introduction

This chapter presents the main findings of the study, whose central objectives were to determine the depression knowledge, understand the attitudes, and help-seeking preferences of undergraduate students at UWC using a quantitative approach as detailed in the previous

chapter. The results are based on a sample of 308 undergraduate students who participated in an online-administered survey. The results start with a presentation of the response rate and then structured in roughly six sections as follows:

- Section A- presents the demographic characteristics of the respondents summarized in a table format.
- Section B- presents frequency analysis based on answers provided by the respondents to the Adolescent Depression Knowledge Questionnaire intended to gauge their depression literacy and the association between depression knowledge and demographic variables
- Section C- presents a summary of responses from the Depression Stigma Scale Questionnaire which measures the attitudes i.e., the personal perceptions of undergraduate students towards depression
- Section D- focuses on their help-seeking behaviours for depression as well as the relationship between the general help seeking preferences and gender of the respondents
- Section E- presents the findings on the impact of the COVID-19 pandemic on perceived mental health care needs of undergraduate students
- Section F: portrays the results from the analysis to determine any associations among personal perceptions of depression, general help seeking and depression knowledge

4.2 Response rate

As mentioned in Section 3.6, the calculated sample size for the study was 373 undergraduate students. Table 4.1 is a summary of the response rate.

Table 4.1: Response rate

Sample frame	Calculated Sample Size	Number of Respondents	Response rate (%)

UWC undergraduate students.	373	308	83

The value shown in Table 4.1 demonstrates the study's high response rate. Even though the study was carried out during lockdown in the Covid-19 era, the fact that students received data support from the university for internet access in their homes and up to three reminder emails were sent to the students at one-week intervals, helped to explain the high response rate. The findings demonstrate the cooperation among undergraduate students at UWC. Obtaining a high response rate in a study increases the reliability of the subject under study (Smith *et al*., 2019).

SECTION A

4.3 Demographic Characteristics of UWC undergraduate students

Knowing the demographic characteristics of UWC undergraduate students is crucial when it comes to determining the knowledge, attitudes, and help-seeking preferences of depression in undergraduate students at the UWC. Table 4.2 below shows the demographic characteristics of all the participants.

Table 4.2: Demographic characteristics of the total participants (n=308)

Characteristic	Category (n=308)	Frequency	Percentage (%)
Student's gender	Male	84	27.3
	Female	224	72.7
Faculty	Community and Health Sciences	53	17.2
	Education	32	10.4
	Economic and Management Sciences	77	25.0
	Law	17	5.5
	Arts	74	24.0
	Natural Science	47	15.3
	Dentistry	8	2.6
Year of study	1st year	77	25
	2nd year	77	25
	Other	154	50
Age group	<= 20 years	101	32.8
	21-23 years	80	26.0
	>= 24 years	127	41.2
Religion	Christianity	218	70.8
	Traditional religion	15	4.9
	Islam	34	11.0
	No religion	28	9.1
	None of the above	13	4.2
Ethnic group	Black African	145	47.1
	White	24	7.8
	Coloured	115	37.3
	Asian/Indian	14	4.5
	Other	10	3.2
Nationality	South African	256	83.1
	Non-South African	52	16.9

Predominantly, the sample consisted of female participants (72.7%, n=224). The bulk of the students were in the faculties of Arts and Economic and Management Sciences (24.0% and 25.0% respectively). The study only included a small number of participants from the faculties of Dentistry (2.6%) and Law (5.5%). Additionally, half of the students were either in their first

or second year of study. Since all faculties and academic levels were represented, fair findings could be produced.

Furthermore, the largest proportion of the participants fell into the 24 years and above age group (41.2%, n=127), followed by the 20 and below age group (32.8%, n=101). It may be said that the most dynamic, youthful, and enthusiastic students make up the undergraduate population at the university. The bulk of the respondents were either from the black African or coloured ethnic groups (47.1%, n=145 and 37.3%, n=115 respectively). Nonetheless, relatively fewer non-South African nationals (16.9%, n=52) took part in the study however, their countries of origin were not recorded.

SECTION B

4.4 Depression literacy in undergraduate students

To determine depression literacy in undergraduate students, the Adolescent Depression Knowledge Questionnaire (ADKQ) was used. No questions were asked about individual symptoms or personal experiences. The responses to the questionnaire were measured through a nominal scale (Yes/No) and students were asked to indicate their agreement or disagreement level with the questions. Table 4.3 is a summary of the responses.

Table 4.3: Depression literacy in undergraduate students

Item	Correct Response	Yes (%)	No (%)
Five percent of all teenagers will suffer a major depression	Yes	90.3	9.7
Depression runs in some families	Yes	85.1	14.9
Depression can be controlled through willpower	No	48.9	51.1
A change in behaviour is a symptom of depression	Yes	79.5	20.5
There are certain groups of people who are immune to depression	No	15.9	84.1
Major depression is a treatable medical illness	Yes	86.4	13.6
A person with depression always feels sad	No	36.4	63.6
The abuse of alcohol and drugs can be a sign of depression	Yes	94.2	5.8
Someone who has a major stress (like having parents get a divorce) always develops a depressive illness	No	36.7	63.3
Major depression is a major cause for suicide in 80% of all successful suicides	Yes	90.6	9.4

According to Table 4.3, the responses reflected a commonly held understanding that 5% of all youths will experience significant depression (90% respondents), depression runs in some families (85.1% of the respondents) and depression can be evidenced by the abuse of alcohol,

drugs, and changes in behaviour (94.2% of the respondents). Furthermore, 90.6% of the respondents agreed that despite being a medical condition that may be treated, significant depression is the primary factor in 80% of all successful suicides. However, just over half of the respondents incorrectly agreed that depression can be controlled through willpower. It's also important to note that 36.7% of the respondents failed to establish that someone who has a major stress (like having parents get a divorce) does not invariably acquire a depressive disease.

4.4.1 Total Scores obtained by the Participants from the ADKQ

If each correct answer was given a point, Figure 4.1 below gives a summary of the statistical analysis results of the ADKQ responses in terms of total correct answers per individual respondent.

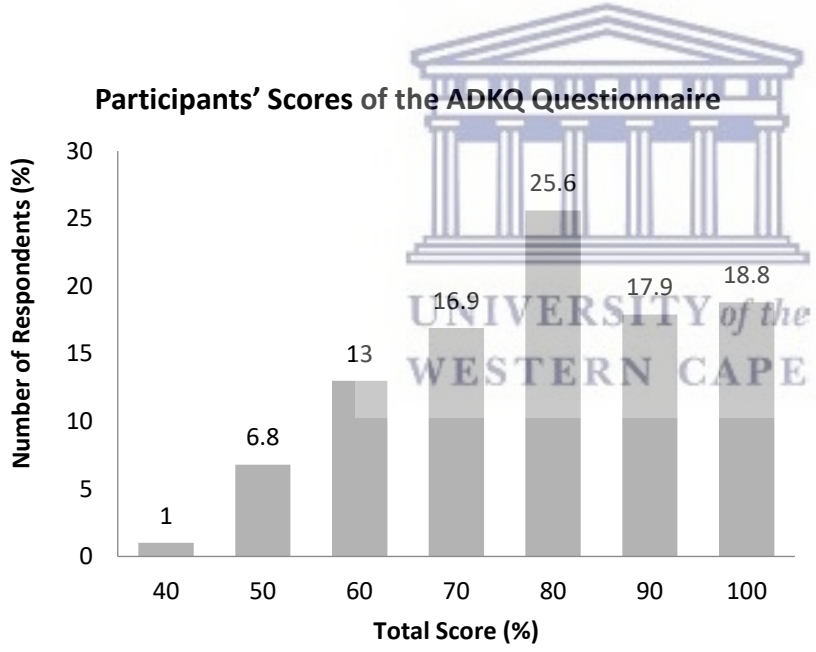

Figure 4.1: Summary of Participants' Scores of the ADKQ Questionnaire

According to Figure 4.1 above, the maximum/highest mark obtained from the ADKQ questionnaire was 100% with the lowest mark being 40%. Only 1% of the respondents had a

total mark that was less than 50% whilst a total of 62.3% of the respondents scored a total of 80% and higher. 18.8% of the respondents got all the depression facts correct.

4.4.2 Association between depression knowledge and demographic variables

A multiple logistic regression was employed in examining if there is significant association between depression knowledge and each of the demographic variables. The choice of the method was based on the fact that the variable depression knowledge's responses were binary in nature. The results from the analysis are presented in Table 4.4.

Table 4.4: Association between depression knowledge and demographic variables

	Depression knowledge		**OR**	**95% C.I. for OR**		**P-values**
	Yes (%)	**No (%)**		**Lower**	**Upper**	
Gender						
Male	72 (85.7)	12 (14.3)	Ref			
Female	273 (88.6)	23 (10.3)	**.640**	**.288**	**1.420**	**0.037**
Faculty						
Dentistry	8 (100)	0 (0)	Ref			
Community and Health Sciences	48 (90.6)	5 (9.4)	.715	.147	3.476	0.142
Education	29 (90.6)	3 (9.4)	1.314	.373	4.626	0.096
Economic and Management Sciences	67 (87)	10 (13)	.411	.040	4.254	0.103
Law	16 (94.1)	1 (5.9)	1.736	.505	5.962	0.117
Arts	61 (82.4)	13 (17.6)	.548	.105	2.861	0.084
Natural Sciences	44 (93.6)	3 (6.4)	.614	.203	2.147	0.091

Study year						
Other	136 (88.3)	18 (11.7)	Ref			
1st year	68 (88.3)	9 (11.7)	**.982**	**.327**	**2.946**	**0.041**
2nd year	69 (89.6)	8 (10.4)	**1.174**	**.375**	**3.674**	**0.023**
Age						
24 and above	113 (89)	14 (11)	Ref			
18-20 years	90 (89.1)	11 (10.9)	**1.009**	**.309**	**3.295**	**0.002**
21-23 years	70 (87.5)	10 (12.5)	**.740**	**.230**	**2.384**	**0.005**
Religion						
None of the above	139 (100)	0 (0)	Ref			
Christianity	188 (86.2)	30 (13.8)	1.111	.212	5.829	0.084
Traditional	13 (86.7)	2 (13.3)	.387	.080	1.880	0.076
Islam	32 (94.1)	2 (5.9)	.170	.021	1.352	0.097
No religion	27 (94.6)	1 (3.6)	.215	.441	1.036	0.130
Ethnic						
Other	9 (90)	1 (10)	Ref			
Black African	131 (90.3)	14 (9.7)	1.962	.439	8.746	0.383
White	21 (87.5)	3 (12.5)	1.751	.708	4.841	0.244
Asian/Indian	14 (100)	0 (0)	1.459	.882	4.780	0.166
Coloured	98 (85.2)	17 (14.8)	1.708	.177	16.457	0.098
Nationality						
South African	226 (88.3)	30 (11.7)	Ref			

Non-South African	47 (88.6)	5 (9.6)	**.981**	**.292**	**3.293**	**0.036**

Ref =Reference group, OR=Odds ratio, CI=Confidence Interval, Bold figures indicate a significant result at the $p < 0.05$ level.

To test whether the independent variable has no correlation with the dependent variable, the p value is used. If there is no relationship, there is no association between the changes in the independent variable and those in the dependent variable meaning there is insufficient evidence to conclude that there is an effect at the population level (James *et al.*, 2021). When a p value in regression is less than the set significance level (in this case 0.05) then it means there is a statistically significant relationship between the two variables and vice versa (James *et al.*, 2021). Factors that were significantly associated with respondent's depression knowledge were gender (p=0.037), study year (p values: 0.041 and 0.023), age (p= 0.02 and 0.05) and nationality (0.036) as shown in Table 4.4 (bold figures).

Females were less likely to have knowledge about depression than males with an odds ratio of 0.640. First year students were less likely to have knowledge about depression than those in other years as supported by the odds ratio of 0.982. However, 2nd year students were more likely to have knowledge about depression than those in other years as supported by the odds ratio of 1.174. Students aged 18-20 years were more likely to have knowledge about depression than those who are above 24 years as supported by the odds ratio of 1.009. As for students aged 21-23 years, they were less likely to have knowledge about depression than those aged above 24 years as indicated by the odds ratio of 0.074. It appeared that Non-South African students were less likely to have knowledge about depression than the South African students as indicated by the odds ratio of 0.981.

SECTION C

4.5 The personal perceptions of undergraduate students towards depression

To describe the attitudes i.e., the personal perceptions of undergraduate students towards depression, the Depression Stigma Scale Questionnaire (DSS) was used. This subscale comprised of nine items measuring the extent to which each participant personally agreed with a statement about depression (e.g., 'if I had depression, I would not tell anyone'). Each item was answered on a 5-point Likert scale ranging from 0 (strongly disagree) to 4 (strongly agree). A summary of the responses in percentages is presented in Figure 4.2 below. (The actual number (n) for each response is presented as supplemental material in Appendix E, Table 2)

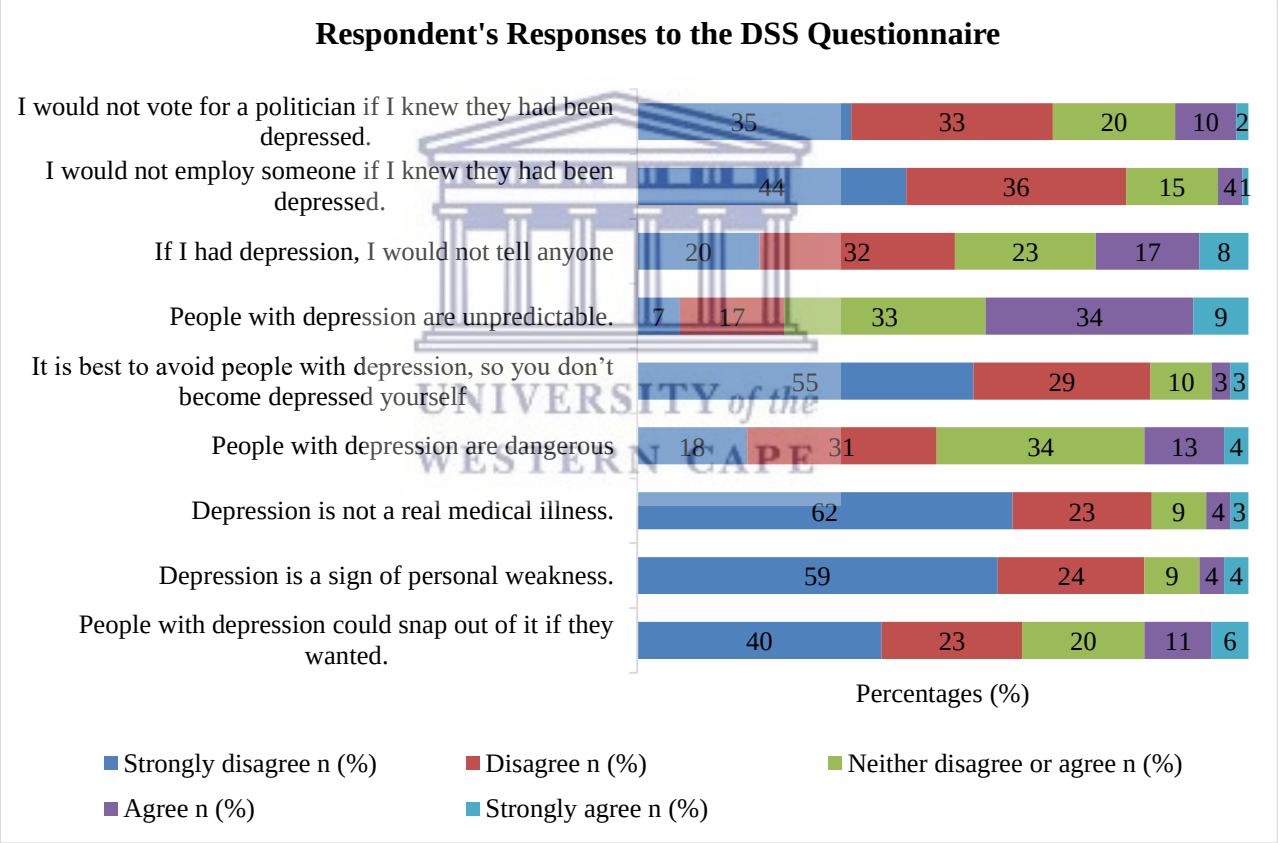

Figure 4.2: Summary of the responses to the DSS Questionnaire for determining the attitude of the undergraduate students towards depression

According to Figure 4.2 above, more than half of the respondents strongly opposed the stigmatizing statements such as depression is not a real medical illness (62%), or it is a sign of weakness (59%) and that people with depression should be avoided to not become depressed yourself (55%). Also, 40% of the respondents strongly disagreed that people with depression could easily snap out of it if they were willing. Less than 20% of the respondents agreed that personal will alone was the remedy for depression. Most of the respondents have a positive perception of depression. Notably however, 34% of the respondents agreed and 9% strongly agreed to the statement that those who have depression are unpredictable. Only 24% opposed (disagreed + strongly disagreed) this statement, 33% remained neutral and 43% approved (agreed or strongly agreed) the statement. Furthermore, 17% agreed to some extent while 34% of the participants could neither agree nor disagree that people with depression are dangerous. Asked about their perception of depression on work-related situations, 68% of the participants would vote for a politician even if they knew they had depression and 80% would still employ someone who has depression.

SECTION D

4.6 The help-seeking behaviours of undergraduate students for depression

The respondents were asked to indicate how likely they would seek help from different sources if they were having a personal or emotional problem. Figure 4.3 below shows a summary of these responses. (The actual number (n) for each response is presented as supplemental material in Appendix E, Table 3)

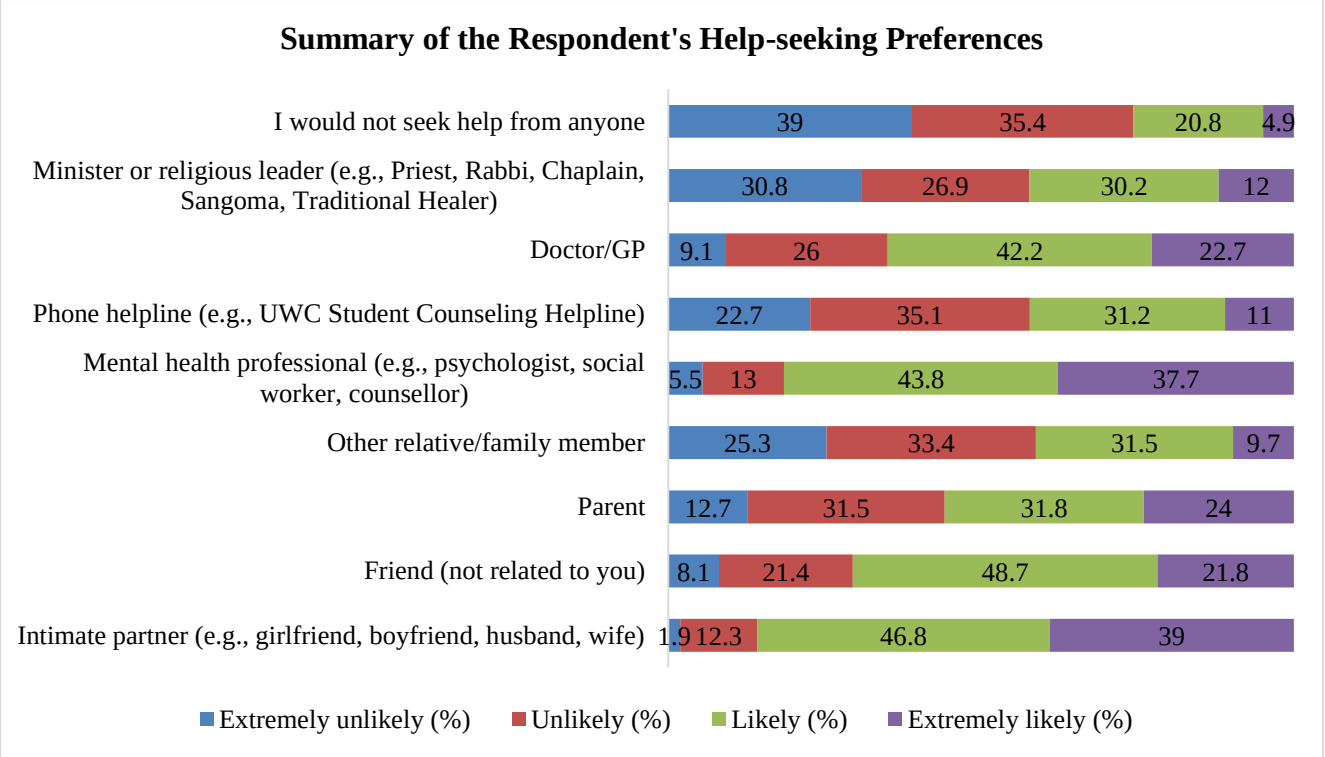

Figure 4.3: Summary of indicated help-seeking preferences of undergraduate students

According to Figure 4.3, most of the respondents (74.4%) (likely + extremely likely) would at least seek help from anyone when having a personal or emotional problem. Most of the students prefer to turn to their intimate partner when having a personal or emotional problem as compared to other help sources. About 86% indicated this preference. Auspiciously, the second common source of help was a mental health professional were less than 20% of the students indicated that they would unlikely prefer this choice. Other preferred sources of help were a friend (70.5%), a doctor/GP (64.9%), and a parent (55.8%). However, students hardly seek assistance from other relative/family members (41.2), or minister/religious leaders (42.2%) or the phone hotline (UWC Student Counselling Helpline) (42.2%).

4.6.1 Relationship between general help seeking preferences and gender of the respondents

To examine if there is an association between gender and general help seeking, a Chi-square test was conducted. The test was conducted under the following hypothesis:

H_0: There is no statistically significant association between gender and general help seeking.

H_1: There is a statistically significant association between gender and general help seeking.

The chi-square results are displayed in Table 4.5

Table 4.5: Association between gender and general help seeking.

	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	26.979[a]	1	**.000**
Likelihood Ratio	19.621	1	.000
Linear-by-Linear Association	.001	1	.000
N of Valid Cases	308		
a. 3 cells (21.4%) have expected count less than 5. The minimum expected count is .91.			

Table 4.5 results, the p-value of 0.00 is smaller than the standard alpha value of 0.05, so we reject the null hypothesis that asserts the 2 variables are independent of each other. In this case, we can safely accept the alternative hypothesis which states that there is a statistically significant association between gender and general help seeking. This shows that in this population, gender does influence someone's decision on seeking help about depression treatment.

SECTION E

4.7 The impact of the COVID-19 pandemic on perceived mental health care needs of undergraduate students

UWC undergraduate students were asked to highlight how Covid-19 pandemic impacted on mental healthcare. Figure 4.4 below shows a summary of the responses as percentages. (The actual number (n) for each response is presented as supplemental material in Appendix E, Table 4). 70% of the students agreed that it would be beneficial to talk to someone about their

concerns regarding the Covid-19 viral pandemic and 79% also concurred that it was important to seek mental health assistance if one became anxious about the Covid-19 pandemic crisis. Moreover, 92% corresponded that it would also be advantageous if mental health specialists assisted individuals in coping with the Covid-19 crisis. Likewise, 88% of the respondents would suggest obtaining mental health assistance to people who are highly affected by the Covid-19 pandemic.

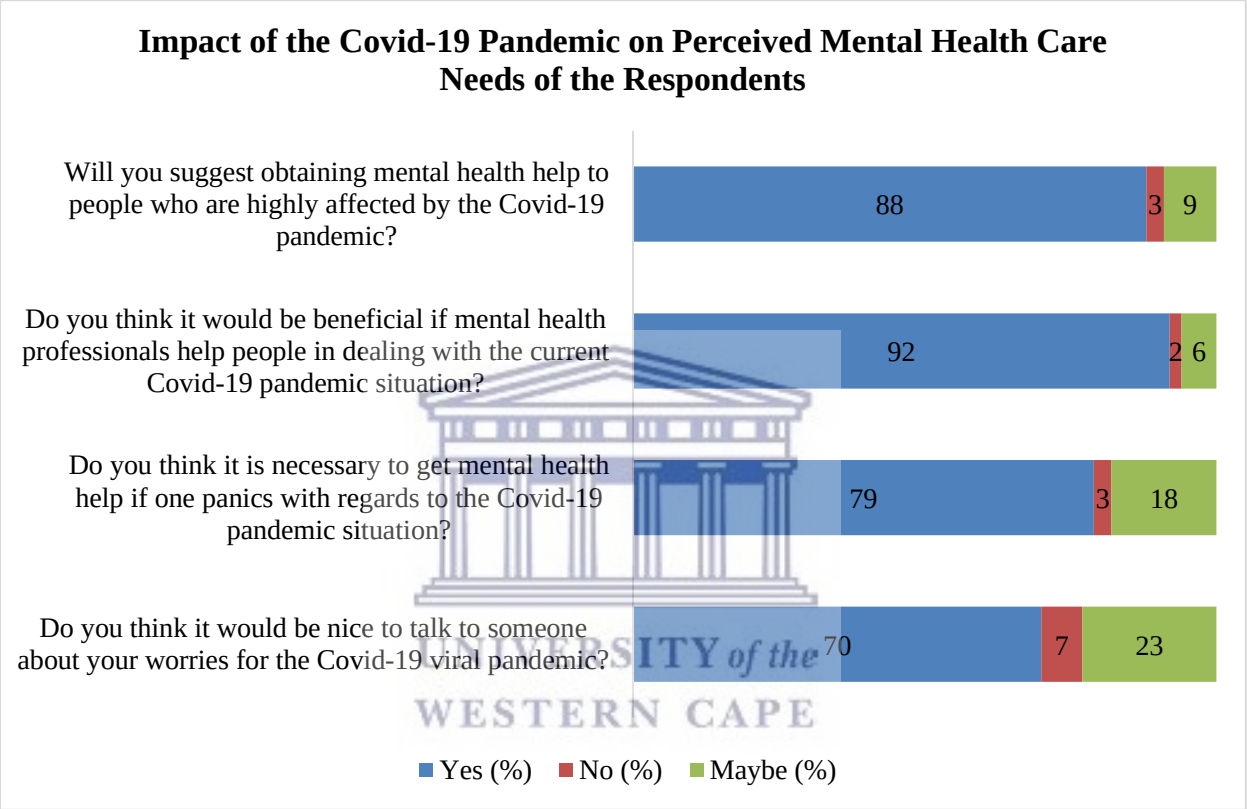

Figure 4.4: The impact of the Covid-19 pandemic on perceived mental health care needs of undergraduate students.

SECTION F

4.8 Associations between personal perceptions of depression and general help seeking with depression knowledge

A multivariate logistic regression was used to examine the posited relationship between knowledge of depression and one's own perception of depression as well as general help

seeking. Responses were categorical in nature, with knowledge of depression measured using a categorical binary variable and was considered the dependent variable, while individual perceptions of depression and general help seeking were measured as independent variables on a five-point and four-pint Likert scale. Table 4.6 displays the analysis' findings.

Table 4.6: Association between personal perceptions of depression and general help-seeking with depression knowledge

	Depression knowledge		**OR**	**95% C.I. for OR**		**P-values**
	Yes N (%)	**No N (%)**		**Lower**	**Upper**	
Personal perceptions of depression						
Strongly disagree	130 (88.4)	17 (11.6)	**1.959**	**.559**	**1.644**	**0.018**
Disagree	82 (86.3)	13 (13.7)	**1.043**	**.622**	**1.750**	**0.024**
Neutral	46 (92)	4 (8)	.998	.801	1.242	0.092
Agree	9 (90)	1 (10)	.664	.308	1.429	0.083
Strongly agree	6 (100)	0 (0)	**Ref**			
General help seeking						
Extremely unlikely	24 (85.7)	4 (14.3)	**Ref**			
Unlikely	53 (85.5)	8 (14.5)	**1.550**	**.340**	**.889**	**0.032**
Likely	137 (90.1)	15 (9.9)	**1.206**	**.869**	**1.718**	**0.037**
Extremely likely	59 (89.4)	7 (10.6)	**1.653**	**.251**	**2.294**	**0.008**

Ref =Reference group, OR=Odds Ratio, CI=Confidence Interval, Bold figures indicate a significant result at the $p < 0.05$ level.

Table 4.6 shows that the factors that have a substantial impact on students' understanding of depression at UWC i.e., those with a p value less than the set significance level of 0.05 (in bold) include both individual's perception of depression and general help seeking. According to the odds ratios, the findings imply that students who disagreed and strongly disagreed on the statements that measured their perceptions towards depression were more likely to have knowledge of depression than those who remained neutral as well as agreed to the statements. Furthermore, it is clear from the odds ratios of 1.550, 1.206, and 1.653 those students who are

unlikely, likely, and extremely likely to seek help for a personal or emotional problem have greater knowledge of depression than students who are extremely unlikely to do so.

4.9 Association between personal perceptions of depression and general help seeking

To examine if there is an association between personal perceptions of depression and general help seeking, a Chi-square test was conducted. A multivariate logistic regression could not be used in this case as both variables are not categorical binary but used a five-point and four-point Likert scale. The test was conducted under the following hypothesis:

H_0: There is no statistically significant association between personal perceptions of depression and general help seeking.

H_1: There is a statistically significant association between personal perceptions of depression and general help seeking.

The chi-square results are displayed in Table 4.7.

Table 4.7: Association between personal perceptions of depression and general help seeking

	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	**21.937[a]**	12	**.038**
Likelihood Ratio	23.012	12	.028
Linear-by-Linear Association	.004	1	.947
N of Valid Cases	308		

According to the results in Table 4.7, it is evident that the p-value of 0.038 is smaller than the standard alpha value of 0.05, so we reject the null hypothesis that asserts the 2 variables are independent of each other. The data suggests that there is a significant association between personal perceptions of depression and general help seeking. It can be concluded that, at 5%

significance level, seeking general help about depression depends on personal perceptions of students.

4.10 Summary

This chapter presented the results of the study, which aimed at assessing the depression literacy, attitudes, and help-seeking preferences of undergraduate students at UWC. The chapter presented the results based mostly on descriptive, frequency and inferential analyses intended to assess the set objectives.

CHAPTER 5: DISCUSSION

5.1 Introduction

In this chapter, the main research findings of the study are discussed considering the central research aim, which was to determine the knowledge, attitudes, and help-seeking preferences of depression in undergraduate students at the University of the Western Cape. Empirical literature is used to interpret and place the findings in the context of the broader research topics. This part will also discuss any association between attitude with depression literacy; attitude with help-seeking behaviour and depression literacy with help seeking behaviour. Furthermore, the impact of the COVID-19 pandemic on perceived mental health care needs of undergraduate students will be discussed.

5.2 Demographic Characteristics of UWC undergraduate students

The demographic characteristics of UWC undergraduates were presented in Table 4.2. According to the results, there were more female (224) than male (84) undergraduate participants, approximately a ratio of 3:1 respectively. Previous literature has confirmed the existence of the gender disparities in admissions or enrolment in universities (Mead, 2022; Cavaglia *et al.,* 2021; UNESCO, 2020; Dube, 2015). These results are in line with the data reported from Council for Higher Educations (CHE) that there were 205 819 more female students were enrolled in South Africa's universities in 2019 than there were males (CHE, 2020). According to Mead (2022), the reason why women are more likely to enrol in tertiary education compared to their male counterparts is the fact that there is a significant difference in their beliefs about future outcomes where women greatly value the feeling of independence and expected earnings compared to men. It is imperative to note that only two options where available to describe gender (either male / female) which was rather not inclusive of participants who neither identify as male or female. Because gender refers to how a person

identifies themselves, irrespective of the sex assigned to them at birth, more options should have been given e.g., non-binary (Rushton *et al*., 2019). This will be corrected in future studies.

Table 4.2 shows that students from the Arts, Community and Health Sciences, Natural Sciences, and Economic and Management Sciences dominated the study. This could mean that there probably are less students enrolled in the law and dentistry faculties as they only constituted 5.5% and 2.6% of the respondents respectively. Furthermore, close to half of the students were of the black African ethnicity followed by the coloured population which constituted approximately 37.3% of the respondents. The other races had little representation in the population. These findings are consistent with data from the CHE (2020) which reported a big increase of black as well as coloured students enrolling in SA universities while the white and Indian student population declined from the year 2014 to 2019. Most of the UWC students were Christians and South Africans. Although fewer, other nationalities, various religious and racial groupings were also recorded suggesting that objective responses were gathered, leading to superior research results.

5.3 Depression literacy in undergraduate students

Depression literacy refers to the knowledge of signs, symptoms, diagnosis, and treatment of depression which affects attitudes about seeking help (Hart *et al*., 2014). The results of the ADKQ questionnaire to determine the depression literacy in undergraduate students are shown in Table 4.3. It is important to understand the level of undergraduate's knowledge of depression to develop content and curriculum enhancing programs around any gaps. Results of the ADKQ reveal a general sufficient level of depression literacy among the students at UWC represented by knowledge of most depressions facts with a few gaps in familiarity about self-control, symptom identification and risk factors. Most of the students could correctly answer at least half of questions with approximately 80% of the respondents getting at least 70% of the questions correct (Fig 4.1). This could be attributed to the efficient services, support and

programs aimed towards enhancing mental health and literacy to the students and staff at UWC offered by the Centre for Student Support Services (CSSS, 2022). The CSSS Office for therapeutic services had a 4393-student reach for the January to September 2022 period, providing counselling interventions, with the aims of restoring and/or enhancing academic functioning of registered UWC students (Adams, 2022).

Conflicting to these findings, when Hess and colleagues (2004) assessed adolescents' baseline knowledge about depression before enrolling them onto a curriculum development program, most students were not able to answer 80% of these questions correctly. Similarly, other studies using different depression literacy questionnaires have also revealed poor depression literacy status among the undergraduate students in other countries e.g., Vietnam, Nigeria, and Bangladesh (respectively: Nguyen Thai and Nguyen, 2018; Aluh *et al*., 2019; Arafat *et al*., 2019). Programs like the Adolescent Depression Awareness Program (ADAP) (Swartz *et al.*, 2010) can be tailor-made to meet the needs of a typical undergraduate student and address this lack of knowledge. The number of students scoring 80% on the ADKQ assessment increased by more than 3 times from the baseline to post-test after the program suggesting effectiveness of a depression literacy enhancing curriculum (Swartz *et al*., 2010).

On examination of the individual questions as opposed to the total of correct answers, some interesting points emerge. There are several questions that the respondents had good knowledge of. Most of the undergraduates knew that "the abuse of alcohol and drugs can be a sign of depression" (95.2%) and similarly 90.6% respondents knew that "major depression is a major cause for suicide in 80% of all successful suicides". Substance abuse and depression are known to often co-occur in young people and are significantly increased by psychosocial factors and economic burdens (Uma, 2006). According to the American Addiction Centre, depression can increase the risk of substance abuse and up to a third of clinically depressed people engage in drug or alcohol abuse (Close, 2022). The chemical intoxicants usually become a way of self-

medication for soothing the feelings of low self-worth, hopelessness and misery that are common symptoms of mental health disorders. Results from a study aimed at examining the relationships between self-esteem, depression, and substance abuse among undergraduate students in Uganda showed significant relation between depression and substance abuse but an insignificant relationship between self-esteem and substance abuse (Tibasaga, 2022). It is therefore encouraging that most of the respondents at UWC have knowledge of the association between depression and substance abuse which if not controlled can lead to suicide (WHO, 2021c, SADAG, 2022).

However, close to half of the students failed to correctly place whether depression could be controlled through willpower or not. This is greatly concerning because according to Swartz and colleagues (2010), this is the question that best assesses the student's understanding of the principal fact of depression as a treatable medical illness. The results indicate the possible presence of the "weak-not-sick" stereotype in this population. The "weak-not-sick" stereotype is a belief that an individual's symptoms do not reflect a real medical condition but rather reflect a personal weakness (Curcio and Corboy, 2020). These findings have also been supported by some studies in populations of young people (Kaushik *et al*., 2016; Hanlon and Swords, 2019; Hanlon and Swords, 2020) where they were found to have been associated with increased discrimination, negative attitudes, and a decreased likelihood of seeking appropriate help for mental illness. Therefore, there is a need for interventions that address this specific area to increase the knowledge on identification and treatment for depression as a mental illness in the students at UWC as they did not fully understand that willpower alone is by no means adequate treatment just as it is not adequate for other diseases such hypertension or diabetes.

Furthermore, close to 40% of the respondents incorrectly answered "yes" to the questions "a person with depression always feels sad" and "someone who has a major stress like having parents get a divorce always develops a depressive disorder". Although typical mostly in adults,

a depressed person is not always sad and family problems do not always result in depression. These two questions go together as can be seen by the similar trends in the results. The respondent who incorrectly thinks that a person who is depressed will always feel sad is likely also to conclude that because a divorce of parents is expected to bring much sadness then automatically one develops a depressive disorder. According to Ham and colleagues (2011), lack of knowledge and awareness of mental illnesses such as depression strongly influence the attitude of its severity and identification of symptoms. The ability to recognise a mental illness has important implications as it can aid in timely and appropriate help-seeking, and ultimately improve outcomes for people with mental illness (Picco, 2018). In addition to understanding about symptom recognition, comprehensive mental health literacy should also include knowledge about mental health treatment services and where to seek help (Kutcher *et al*., 2016; Wang *et al*., 2019). It is therefore imperative to promote mental health literacy programs that address all these areas.

5.3.1 Association between depression literacy and the demographics

Data from Table 4.4 showed the results of the multiple logistic regression which was used to examine if there was a significant association between depression knowledge and the demographic variables. Evidently, gender, study year, age and nationality were significantly associated with the respondents' depression knowledge. The findings from this study that males are more likely to have knowledge about depression than females (OR=0.640, p=0.037) are conflicting to existing literature (Townsend *et al*., 2019; Wimsatt *et al*., 2020). For example, in a study aimed at examining gender differences in an Adolescent Depression Awareness Program's (ADAP) impact on depression literacy and stigma, gender exhibited a main effect, with females showing greater rates of depression literacy than males (OR=1.51, p=.001) (Townsend *et al*., 2019).

Furthermore, in our sample, first year students were less likely to have knowledge about depression than those in other years which is like the findings of a study were poor literacy status was revealed among the first-year university students of Bangladesh (Arafat *et al*., 2018). This may be the result of increased academic knowledge and life experience as well as familiarity with a university student life for those who have been in the environment longer. This makes it more likely for a student to access available mental health services on campus which can possibly contributes to increased mental health literacy (Miles *et al*., 2020). Participants aged 18-20 years were more likely to have knowledge about depression than those who are above 24 years as supported by the odds ratio of 1.009. This agrees with the results from previous research that found that individuals in the youngest age groups scored highest on identification of disorders (Hadjimina and Furnham, 2017).

In terms of nationality, it appeared that non-South African students were less likely to have knowledge about depression than their South African counterparts. With this in mind, the UWC International Student Services Office (ISSO) which offers student administration to support international students at various stages of their education at the university might need to support or incorporate mental health programs that expose these minorities regarding knowledge, awareness, attitude, and treatment of mental health.

5.4 The personal perceptions of undergraduate students towards depression

Stigma is an important public health issue which refers to an act of distinguishing, bringing shame, disgrace, or disapproval towards an individual with certain undesirable characteristics causing them to be rejected or discriminated against from society (Cook and Wang, 2010; Goffman,2009). The results from the Depression Stigma Scale (DSS) questionnaire that measured the respondent's personal perceptions of- or attitude towards depression (Griffiths *et al*., 2008 and Zhu *et al*., 2019) were presented in Section 4.5. The findings of this study indicate

that the majority of the respondents opposed most of the stigmatizing statements about depression. Approximately 85% of the undergraduate students opposed that "depression is not a real medical illness" and 83% disagreed that "depression is a sign of personal weakness". More importantly, they showed some level of understanding that depression is not transmittable by association with a depressed individual.

However, there was great confusion showing a knowledge gap in identifying some depression symptoms. Only 24% of the respondents opposed that "people with depression are unpredictable" whilst another third remained neutral (neither agreed nor disagreed). Stigmatizing ideas about people with depression are common especially this belief that people with depression are unpredictable or are responsible for their own condition as was established in other previous studies (Boerema *et al*., 2016; Cook and Wang, 2010; Griffiths *et al*., 2008). Also, more than half of the undergraduates remained neutral or did not oppose the stigmatising statement that "people with depression are dangerous". These findings are consistent with those from other studies of the stigma towards depression which emphasized the prevalence of violent, dangerous, and unpredictable stereotyping of depressed people (Berger, 2018; Lien and Kao, 2019; Nersessova *et al*., 2019). These negative representations of people with mental illnesses abound in the media especially in popular crime television shows and movies (Weberman and Brand, 2017). Common misrepresentations include all depressed people being suicidal and all people with schizophrenia hallucinate and are disruptive (Weberman and Brand, 2017; Saleh, 2020). As a result, people possess negative emotional reactions e.g., fear and often try and distance themselves from these individuals, which generally leads to further social isolation and psychological and interactive problems (Curcio and Corboy, 2020).

In a national household survey of Australian adults, Griffiths, and colleagues (2011) found that a belief in dealing with depression alone was to some extent a consequence of stigmatising attitudes to depression. Social stigma increased during the COVID-19 pandemic as people from

certain populations (Indian north-east) were targeted as being the reason for the global outbreak which it made people hide their illness and not seek health care immediately fuelling the spread of the virus (WHO, 2020). In another study within a population of university students (Conceicao *et al*., 2020), higher personal stigma weakened help-seeking attitudes. There is still an urgent need for more university programs or interventions that can address and dissipate these ongoing negative perceptions and misinformed beliefs to reduce personal and perceived stigma in students with depression, give them full social acceptance, encourage help seeking, and provide adequate mental health resources that they need to thrive.

5.5 The help-seeking behaviours of undergraduate students for depression

The results of the help-seeking behaviours of undergraduate students for depression are described in Section 4.6. The findings in the current study reveal that the students demonstrated preferences for non-professionals such as an intimate partner, friends, and family members over professionals such as doctors and counsellors attained through the university's phone helpline. This finding was consistent with previous studies where friends and parents were the first choice of preference to obtain help when faced with health problems and mental issues (Gorczynski *et al*., 2017; Nguyen Thai and Nguyen, 2018; Thai *et al*., 2020). Interestingly, 81.5% respondents from this current study's population also were likely to seek help from a mental health professional such as a social worker or psychologist.

These findings are analogous to those obtained in a study of the help-seeking preferences among Chinese college students exposed to a natural disaster where a large proportion of students preferred to seek support from loved ones and professionals (Shi and Hall, 2020). According to Ham and colleagues (2011), it is conceivable that both treatment approaches might occur according to differences in perceived severity of the mental problem. They also attributed the similar help-seeking behaviour of the Vietnamese to be likely influenced by lack of knowledge about and perceptions and beliefs towards mental health care. Contrastingly in

another study, although Vietnamese students demonstrated good knowledge of common mental disorders, they still preferred non-professional help as compared to professional (Thai *et al*., 2020).

Despite the type and severity of mental disorders, young people seem to often favour to obtain help from non-professionals and tend to look for help and information from the Internet and social media networks (Mitchell *et al*., 2017; Thai *et al*., 2020). Possibly the 25% students in this current study who responded that they would undoubtedly not seek help from anyone refer to online sites for information and self-assistance. Perhaps like the participants from a previous study, they also consider self-help strategies like relaxing, physical activity and reading to be the most helpful interventions (Nguyen Thai and Nguyen, 2018).

It is important to have knowledge of where to go should they need assistance as was supported by Kutcher *et al*., (2016) and Wang *et al*., (2019). Although Yu and colleagues (2015) found favourable high help-seeking intentions for mental health problems in a population of rural Chinese adults, their low knowledge of potential help sources was discouraging. There is a need for the CSSS to consistently advertise their services through all possible platforms on campus to raise awareness. To facilitate students to prefer to seek professional help they must first gain sufficient education so that they can confidently know that they will not be discriminated against and have confidence that the school provides reliable and effective assistance.

The relationship between gender and help-seeking preferences was further analysed using a Chi-square test and the results (Table 4.5) show that in this population, gender does influence someone's decision on seeking help about depression treatment. These findings are consistent with those obtained when the effects of gender and depression stigma were analysed in population of university students (Conceicao *et al*., 2020). Both stigma and help-seeking

attitudes were positively affected by gender. Although we did not do further analysis to identify how being male or female associated with help-seeking, existing literature almost always identifies women to seek help more likely for mental health issues as compared to men (Oliver *et al*., 2005; Yu *et al*., 2015; Yousaf *et al*., 2015; Do *et al*., 2019; Sagar-Ouriaghli *et al*., 2019; Sagar-Ouriaghli *et al*., 2020). Reasons for this phenomenon are to a greater extent attributable to traditional stereotypes of masculinity, social status and power that hinder male willingness to seek mental health help (Sagar-Ouriaghli *et al*., 2020).

5.6 The impact of the COVID-19 pandemic on perceived mental health care needs of undergraduate students

The global outbreak of COVID-19 pandemic brought with it devastating physical and mental health issues which are still visible in societies due to stressful situations and uncertainty (Janssen *et al*., 2020). In Malaysia, 89.4% per cent calls made to a help line managed by the Malaysia Ministry of Health in the first half of 2021 were related to mental health issues that required emotional and psychological support (Marmaya, 2021). The factors reported to have led to mental illness include the loss of loved ones, persistence of new virus variants, job, or income losses as well as ongoing financial distress and family issues arising from long isolation. Mandates like national lockdowns, staying at home, closure of schools, and other social facilities affected life patterns and impacted physical and mental health concerns such as anxiety and depression (Li *et al*., 2020; Roy *et al*., 2020). A study of South African adolescents and young people to explore and document their experiences, challenges, and coping strategies during the national lockdown revealed severe emotional impacts from immediate COVID-19 related shocks and uncertainties about the future with several participants disclosing depression and inability to cope (Gittings, 2021).

The impact of the COVID-19 pandemic on perceived mental health care needs of undergraduate students are summarised in Section 4.6. Most of the participants showed a

positive inclination towards the idea of having someone being there to release their worries regarding the pandemic as being needed. The majority of the respondents i.e., 88%, suggested obtaining mental health help to people who are highly affected by the Covid-19 pandemic. Furthermore, 92% agreed on the necessity of obtaining professional help to deal with emotional issues and other psychological issues during the pandemic. These results are similar to those portrayed by an Indian population where more than 80% of the respondents agreed to the advantage of mental health professional help to deal with the pandemic (Roy *et al*., 2020). Likewise in another study of the Indian population, the majority (77%) of respondents agreed on the importance of professional mental help but 40% reported not likely to take professional help if they experience extreme stress and anxiety due to COVID-19. In another similar study of a Malaysian student population, most of the students also felt the need for the professional help from mental health experts to deal with emotional issues and other psychological issues during the pandemic (Marmaya *et al*., 2021). From the current study, clearly the students at UWC perceive the need for mental health support during the pandemic and fully relied on the university to provide this support and services.

5.7 Associations between personal perceptions of depression and general help seeking with depression knowledge

The results on table 4.6 show an association between those who disagreed and strongly disagreed on the statements that measured their perceptions towards depression and depression knowledge. Since all the statements were negatively oriented e.g., “depression is not a real medical illness”, it can be deduced that those who opposed the statements had a positive attitude towards depression and those who agreed portrayed stigmatizing attitudes to depression. Hence, the respondents who showed positive attitudes to depression were more likely to have knowledge of depression. These findings align with those from a prior study in a national survey of the Australian adult population where personal stigma was also found to be

associated with lower depression literacy (Griffiths *et al*., 2008). Similarly, another study aimed at examining the specific role of patient education level as a predictor of mental health literacy indicated that participants with at least some college education reported significantly greater depression knowledge and less stigma surrounding depression than participants with lower education levels (Lopez *et al*., 2018). Surprisingly in contradiction with many findings, another study found that people with low mental health literacy had a more positive attitude towards mental illnesses (van der Ham *et al*., 2011). They concluded that more knowledge of mental illnesses seemed to decrease the willingness to engage in social relationships with mentally ill people.

The present findings also indicated that those students who are likely and extremely likely to seek help for a personal or emotional problem have greater knowledge of depression than students who are extremely unlikely to do so. It has been suggested that mental health illiteracy can possibly impair help-seeking behaviour making it a risk for common mental disorders like depression (Almanzar *et al*., 2014). In line with our findings, when Wang *et al* (2019) examined the relationships among mental health literacy for depression and actual help-seeking behaviour in a population of high school students, logistic regression results showed that adolescents with higher mental health literacy for depression were more likely to report seeking help in general. Similarly, in a survey to investigate depression literacy among undergraduate students in Vietnam, Nguyen Thai, and Nguyen (2018) reported that 82.1% respondents among those who correctly identified depression would seek help as compared to 81.1% from those who did not recognize depression.

5.8 Association between personal perceptions of depression and general help seeking

So far, we have established that seeking help for mental health issues is the opening phase toward assessing the mental state and diagnosis leading to treatment and management by professionals. Data from the present study suggests that there is a significant association between personal perceptions of depression and general help seeking. It can be concluded that, at 5% significance level, seeking general help about depression depends on personal perceptions of students. In a similar study aimed at examining factors associated with mental help-seeking attitudes among students, general help-seeking attitude was positively and significantly related to mental help-seeking attitude which agrees with our findings (Ibrahim *et al*., 2019). These findings seem to be supported in literature that readiness, willingness, and likeliness to seek help for mental problems either from other people, professionals or non-professionals is usually indicative of a positive personal and perceived perception of the mental illness (Yousaf *et al*., 2015; Nguyen Thai and Nguyen, 2018; Do *et al*., 2019; Sagar-Ouriaghli *et al*., 2019; Thai *et al*., 2020). Overall, results from the current study demonstrate the importance of depression literacy and attitudes towards mental illnesses in young people's help-seeking behaviour.

CHAPTER 6: CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

6.1 Introduction

This chapter presents a summary of the key findings, limitations of the study and makes recommendations for future studies. The study was based on a self-administered online questionnaire involving 308 undergraduate students. The main aim of this study was to determine the knowledge, attitudes, and help-seeking preferences of depression in undergraduate students at the University of the Western Cape. This was based on the following 5 objectives: (1) to determine depression literacy in undergraduate students; (2) to describe the attitudes of undergraduate students towards depression; (3) to determine the help-seeking behaviours of undergraduate students for depression; (4) to determine the association between attitude with depression literacy; attitude with help-seeking behaviour and depression literacy with help seeking behaviour; and (5) to investigate the impact of the COVID-19 pandemic on perceived mental health care needs of undergraduate students.

6.2 Key Findings

6.2.1 Objective 1: To Determine Depression Literacy in Undergraduate Students

Overall, this study identified that there is generally a high level of depression literacy in undergraduate students at UWC with 80% of the respondents getting at least 70% of the questions correct. Only 1% of the respondents scored less than 50%. Factors that were significantly associated with respondent's depression knowledge were gender (p=0.037), study year (p values: 0.041 and 0.023), age (p= 0.02 and 0.05) and nationality (0.036). Males were more knowledgeable of depression as compared to females. Being a first year as well as being non-South African was significantly associated with poor depression literacy.

6.2.2 Objective 2: To Describe the Attitudes of Undergraduate Students Towards Depression

Most students showed positive attitudes towards depression by opposing the stigmatizing statements. About 85% of the respondents disagreed that depression is not a real medical illness while 83% opposed that it is a sign of personal weakness. This shows that most of the respondents have a positive outlook towards depression. However, approximately half responded that depressed people are dangerous and less than 25% opposed that depressed people are unpredictable.

6.2.3 Objective 3: To Determine the Help-Seeking Behaviours of Undergraduate Students for Depression

The undergraduates demonstrated greater preferences for non-professionals such as an intimate partner (86%) and friends (71%) as compared to professionals such as doctors (65%). About 82% of the undergraduates would opt for a mental health professional e.g., a psychologist, social worker, or counsellor whereas only 42% would seek help from the university's phone helpline. Furthermore, 25% responded that they would not seek help from anyone.

6.2.4 Objective 4: To Determine the Association Between Attitude with Depression Literacy; Attitude with Help-Seeking Behaviour and Depression Literacy with Help Seeking Behaviour

There was a statistically significant association between gender and general help seeking (p=0.038). Additionally, there was a significant association between personal perceptions (attitude) of depression and general help seeking (p=0.038) as well as attitude of depression and depression literacy.

6.2.5 Objective 5: To Investigate the Impact of the COVID-19 Pandemic on Perceived Mental Health Care Needs of Undergraduate Students

The majority of the undergraduates supported that it was necessary to obtain mental health help in coping with the Covid-19 pandemic. 70% of the students agreed that it would be beneficial to talk to someone about their concerns regarding the Covid-19 viral pandemic and close to 80% also concurred that it was important to seek mental health assistance if one became anxious about the Covid-19 pandemic crisis whilst 92% agreed that it would also be advantageous if mental health specialists assisted individuals in coping with the Covid-19 crisis.

In conclusion, there is generally a high level of depression literacy in the undergraduate students at UWC. Males have more knowledge of depression as compared to females and being a first year as well as being non-South African was significantly associated with poor depression literacy. Although the undergraduates portrayed less stigma towards depression, many still think that depressed people are dangerous and unpredictable. In terms of help-seeking preferences, UWC undergraduates prefer non-professionals mostly an intimate partner or a friend as compared to professionals such as doctors. Less than half would use the university helpline for support on mental health diseases. Gender and personal perceptions (attitude) of depression were significantly associated with general help seeking. Attitude of depression was also significantly associated with depression literacy. Finally, most of the undergraduates at UWC support that it was necessary and beneficial to obtain mental health help in coping with the Covid-19 pandemic.

6.3 Limitations of the Study

Describing the limitations of the study from the researcher's perspective aims to highlight possible weaknesses that could have had an impact on the study. The major limiting factor for this study was the Covid-19 pandemic which started in December 2019 and spread around the world from Wuhan (WHO, 2020). Because this was an online study, only participants with access to the internet at home could participate in the study which resulted in less students participating as was initially expected. Another limitation was that although the survey instrument was taken from different pretested questionnaires, due to time constraint and issues of the national lockdown due to Covid-19 pandemic, they were not pretested to help determine whether they would function properly as a valid and reliable research tool. Furthermore, a pilot test was also required as a trial run of the entire study from start to finish to increase the success of the research process.

6.4 Recommendations

Based on the research findings, the following recommendations were made:

- Although personal stigma was a bit low in this population, the university should provide campus programs that can address and dissolve these ongoing negative perceptions and misinformed beliefs to reduce stigma in students with depression that also gives them the full social acceptance and adequate mental health resources that they need to thrive.
- Students in the psychology or public health departments should do more research to examine the underlying construct of stigma in people who suffer from depression and make recommendations that optimize initiatives and interventions that reduce both personal and perceived stigma. This is important since most research on personal and perceived stigma is undertaken in community samples of people without a diagnosis of depressive disorder like this population just like in this study.

- In terms of the research methodology, the researcher recommends that the university must fund a larger-scale study with a larger sampling size, using a pretested questionnaire with a pilot study to increase the success of the study which gives results that has better representability of the student population at UWC.
- Because a survey design is unable to assess progress or change over time specially to check whether educational programs are being effective, this researcher recommends a longitudinal study may be used to see these alterations especially after programs set to enhance the depression literacy, attitude, and help-seeking preferences.
- Quantitative research method yields impersonal responses and does not document the actual words of the participants providing limited understanding of the context of the responses (Eyisi, 2016). Therefore, the researcher recommends a qualitative research method may be utilised to gain a deeper understanding of some of the personal challenges and factors that's affect knowledge, attitude, and help-seeking preferences towards depression. It will then be easier for the university to create programs that effectively address these challenges.
- Moreover, the university with the help of the CSSS must provide educational campaigns targeting depression literacy, and misconceptions about depression e.g., depressed people are dangerous and unpredictable can assist to reduce discrimination and improve attitudes and health literacy. Information and educational resources on mental diseases should be readily available e.g., have a clearly labelled section in the university library freely accessible to all students especially first years, non-South African and females.
- The fact that the majority of the undergraduates would seek help from their intimate partner but only 42% would prefer the phone helpline reflects a lack of knowledge that these services are available to all registered students at the university through the help

line. There is a need for the Centre for Student Support Services (CSSS) to consistently advertise their services through all possible platforms on campus to raise awareness. To facilitate students to prefer to seek professional help they must first gain sufficient education so that they can confidently know that they will not be discriminated against and have confidence that the school provides reliable and effective assistance.

- Another method of addressing the fact that many students who could receive on-campus care but do not is the introduction of low-resource digital mental health support mobile applications by the CSSS. These are more convenient and have the ability to send push notifications easily to engage a user and direct them back to the app. These can be used in conjunction with the traditional walk-in services.
- The Department of Higher Education should plan and implement activities for students that integrate mental health education such as quizzes, competitions for bursaries, and development of competitive health initiatives whose successes can be measured and voted for. Prizes e.g., bursary funding to be won for exceptional low-budget but effective to keep on updating their knowledge on health-related issues

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APPENDIX

APPENDIX A: QUESTIONNAIRE

DEPRESSION LITERACY, ATTITUDES AND HELP-SEEKING PREFERENCES QUESTIONNAIRE

Researcher's comments:

This questionnaire assesses your knowledge, attitudes, and help-seeking preferences towards depression. It comprises of five sections:

1. Demographic Questionnaire
2. Adolescent Depression Knowledge Questionnaire
3. Personal Perception of Depression Questionnaire
4. General Help Seeking Questionnaire
5. Perceived Mental Healthcare Needs During the Covid- 19 Pandemic

The complete questionnaire will take you no longer than 15 minutes to complete.

SECTION 1: SOCIO-DEMOGRAPHIC INFORMATION

In this section, tick the box with your correct answer.

1. Gender:

☐ Male
☐ Female

2. Which faculty are you enrolled in?

☐ Community and Health Sciences
☐ Education
☐ Economic and Management Sciences
☐ Law
☐ Arts
☐ Natural Science
☐ Dentistry

3. Year of study:

☐ 1st year
☐ 2nd year

4. What is your age group?
   - ☐ 20 years and below
   - ☐ 21-23 years
   - ☐ 24 and above

5. Religion:
   - ☐ Christianity
   - ☐ Traditional religion
   - ☐ Islam
   - ☐ No religion
   - ☐ None of the above

6. Ethnic group:
   - ☐ Black African
   - ☐ White
   - ☐ Colored
   - ☐ Asian/Indian
   - ☐ Other

7. Nationality:
   - ☐ South African
   - ☐ Non-South African

SECTION 2: ADOLESCENT DEPRESSION KNOWLEDGE QUESTIONNAIRE

For each of the following statements (8-17), please indicate whether your response is YES or NO

8. Five percent of all teenagers will suffer a major depression
   - ☐ YES
   - ☐ NO
9. Depression runs in some families
   - ☐ YES
   - ☐ NO
10. Depression can be controlled through willpower
   - ☐ YES
   - ☐ NO
11. A change in behavior is a symptom of depression
   - ☐ YES
   - ☐ NO
12. There are certain groups of people who are immune to depression
   - ☐ YES
   - ☐ NO
13. Major Depression is a treatable medical illness
   - ☐ YES

☐ NO

14. A person with depression always feels sad
    ☐ YES
    ☐ NO
15. The abuse of alcohol and drugs can be a sign of depression
    ☐ YES
    ☐ NO
16. Someone who has a major stress (like having parents get a divorce) always develops a depressive illness
    ☐ YES
    ☐ NO

17. Major depression is a major cause for suicide in 80% of all successful suicides
    ☐ YES
    ☐ NO

SECTIONS 3: PERSONAL PERCEPTIONS OF DEPRESSION

Please indicate how strongly you agree or disagree with each statement (18-26).

18. People with depression could snap out of it if they wanted.
    ☐ Strongly disagree
    ☐ Disagree
    ☐ Neither agree nor disagree
    ☐ Agree
    ☐ Strongly agree
19. Depression is a sign of personal weakness.
    ☐ Strongly disagree
    ☐ Disagree
    ☐ Neither agree nor disagree
    ☐ Agree
    ☐ Strongly agree
20. Depression is not a real medical illness.
    ☐ Strongly disagree
    ☐ Disagree
    ☐ Neither agree nor disagree
    ☐ Agree
    ☐ Strongly agree

21. People with depression are dangerous.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree

22. It is best to avoid people with depression, so you don't become depressed yourself

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree

23. People with depression are unpredictable.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree

24. If I had depression, I would not tell anyone.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree

25. I would not employ someone if I knew they had been depressed.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree
- ☐ Agree
- ☐ Strongly agree

26. I would not vote for a politician if I knew they had been depressed.

- ☐ Strongly disagree
- ☐ Disagree
- ☐ Neither agree nor disagree

☐ Agree

☐ Strongly agree

SECTIONS 4: GENERAL HELP-SEEKING QUESTIONNAIRE

If you were having a personal or emotional problem, how likely is it that you would seek help from the following people? Please indicate your response by choosing the answer that best describes your intention to seek help from each help source that is listed (27-35).

27. Intimate partner (e.g., girlfriend, boyfriend, husband, wife):

☐ Extremely unlikely

☐ Unlikely

☐ Likely

☐ Extremely likely

28. Friend (not related to you):

☐ Extremely unlikely

☐ Unlikely

☐ Likely

☐ Extremely likely

29. Parent:

☐ Extremely unlikely

☐ Unlikely

☐ Likely

☐ Extremely likely

30. Other relative/family member:

☐ Extremely unlikely

☐ Unlikely

☐ Likely

☐ Extremely likely

31. Mental health professional (e.g., psychologist, social worker, counsellor):

☐ Extremely unlikely

☐ Unlikely

☐ Likely

☐ Extremely likely

32. Phone helpline (e.g., UWC Student Counseling Helpline):

- ☐ Extremely unlikely
- ☐ Unlikely
- ☐ Likely
- ☐ Extremely likely

33. Doctor/GP:

- ☐ Extremely unlikely
- ☐ Unlikely
- ☐ Likely
- ☐ Extremely likely

34. Minister or religious leader (e.g., Priest, Rabbi, Chaplain, Sangoma, Traditional Healer):

- ☐ Extremely unlikely
- ☐ Unlikely
- ☐ Likely
- ☐ Extremely likely

35. I would not seek help from anyone:

- ☐ Extremely unlikely
- ☐ Unlikely
- ☐ Likely
- ☐ Extremely likely

SECTIONS 5: PERCEIVED MENTAL HEALTHCARE NEEDS DURING THE COVID- 19 PANDEMIC

Covid-19 is having devastating effects globally with anxiety and concerns about the disease affecting every individual to variable extents. For the following questions (36-39), choose the best answer that describes your perception.

36. Do you think it would be nice to talk to someone about your worries for the Covid-19 viral pandemic?

- ☐ Yes
- ☐ No
- ☐ Maybe

37. Do you think it is necessary to get mental health help if one panics with regards to the Covid-19 pandemic situation?

- ☐ Yes
- ☐ No
- ☐ Maybe

38. Do you think it would be beneficial if mental health professionals help people in dealing with the current Covid-19 pandemic situation?
    - ☐ Yes
    - ☐ No
    - ☐ Maybe

39. Will you suggest obtaining mental health help to people who are highly affected by the Covid-19 pandemic?
    - ☐ Yes
    - ☐ No
    - ☐ Maybe

This is the end of the questionnaire.

Thank you very much for taking time to complete these questions and participate in this study.

APPENDIX B: INFORMATION SHEET AND CONSENT FORM

INFORMATION SHEET AND INFORMED CONSENT

Project Title:

Depression literacy, attitudes, and help-seeking preferences: a cross-sectional survey of undergraduate students at the University of the Western Cape.

What is this study about?

This is a research project being conducted by Daphine Mundondo at the University of the Western Cape towards a Master of Public Health degree. We are inviting you to participate in this research project because you are an undergraduate student, registered for a full-time, three-year degree at UWC for the 2020 academic year. The purpose of this research project is to describe the knowledge, attitudes, and help-seeking preferences towards depression in undergraduate students at the University of Western Cape. It assesses any association between the level of depression knowledge and attitude with help-seeking preferences.

What are the benefits of this research?

The results may help the investigator to learn more about depression literacy and attitude in undergraduates at UWC and if it has an association with their help-seeking behavior. The self-assessment of your personal knowledge of depression might trigger you to want to get more knowledge concerning the matter. This study can help in designing appropriate intervention strategies to enhance learning and improve mental health literacy, reduce stigmatization, and promote professional health-seeking behaviors. Further, useful insights from the results may assist in the development of a student mental health policies and

What will I be asked to do if I agree to participate?

1. Give informed consent before you participate.
2. You will then be asked to complete an online questionnaire which has structured questions with predetermined response options you can choose from. It will take no longer than 15 minutes to complete.

The questionnaire comprises of 5 sections: a demographic questionnaire; the Depression

Knowledge Questionnaire which assesses your knowledge of depression; the Depression Stigma Scale (DSS) that measures your personal attitude towards depression; the General Help Seeking Questionnaire (GHSQ) which measures your help-seeking preferences and 4 questions that assess your perceived mental health care needs during the Covid-19 pandemic.

Will my identity be kept confidential?

The researcher undertakes to protect your identity and the nature of your contribution. The survey is anonymous and will not contain information that may personally identify you.

What are the risks of this research?

All human interactions and talking about self or others carry some amount of risk. We will nevertheless minimize such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a professional for further assistance or intervention.

Do I have to be in this research, and may I stop participating at any time?

Your participation in this research is completely voluntary. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by Daphine Mundondo, a master's student in Public Health at the University of the Western Cape. If you have any questions about the research study itself, please contact Daphine Mundondo at: 0634688269 or 3815528@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Prof U Lehmann
Head of Department
School of Public Health
University of the Western Cape
Private Bag XI7, Bellville 7535
ulehmann@uwc.ac.za

This research has been approved by the Biomedical Sciences Research Ethics Committee of the University of the Western Cape (Ethics Ref No: BM19/10/25).

Biomedical Sciences Research Ethics Committee
University of the Western Cape
Private Bag X17, Bellville 7535
Tel: +27 21 959 4111/2948
Email: research-ethics@uwc.ac.za

* Required

CONSENT FORM

The study has been described to me in language that I understand. I understand what my participation will involve, and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

* *Check the one that applies.*

- ☐ YES
- ☐ NO

APPENDIX C: ETHICAL CLEARANCE AND PERMISSION TO CONDUCT RESEARCH AT UWC

Note: Double-click inside/ double-tap to open pdfs in Adobe

UNIVERSITY of the WESTERN CAPE

OFFICE OF THE DIRECTOR: RESEARCH
RESEARCH AND INNOVATION DIVISION

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19 March 2020

Ms D Mundondo
School of Public Health
Faculty of Community and Health Sciences

Ethics Reference Number: BM19/10/25

Project Title: Depression literacy, attitudes and help-seeking preferences: a cross sectional survey of undergraduate students a university in te Western Cape Province, South Africa.

Approval Period: 19 March 2020 – 19 March 2021

I hereby certify that the Biomedical Science Research Ethics Committee of the University of the Western Cape approved the scientific methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval.

Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias
Research Ethics Committee Officer
University of the Western Cape

NHREC REGISTRATION NUMBER -130416-050

FROM FOPL TO ACTION THROUGH KNOWLEDGE

REQUEST FOR PERMISSION TO CONDUCT RESEARCH AT THE UNIVERSITY OF THE WESTERN CAPE

This serves as acknowledgement that you have obtained and presented the necessary ethical clearance and your institutional permission required to proceed with the project referenced below:

Name of Researcher
DAPHINE MUNDONDO

Research topic
Depression literacy, attitudes and help-seeking preferences: a cross-sectional survey of undergraduate students at a university in Western Cape province, South Africa

Period permission is valid for
14 July 2020 – 19 March 2021
(or as determined by the validity of your ethics approval)

Reference code
UWCRP140720DM

You are required to engage this office in advance if there is a need to continue with research outside of the stipulated period. The manner in which you conduct your research must be guided by the conditions set out in the annexed agreement: *Conditions to guide research conducted at the University of the Western Cape.*

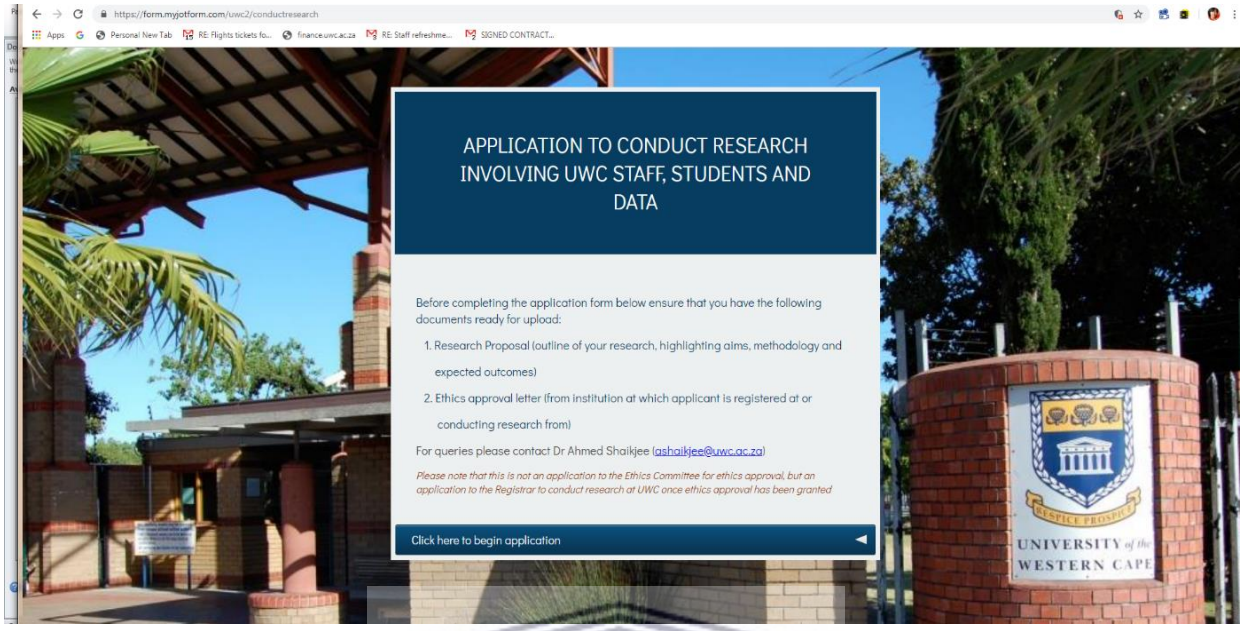
Please be at liberty to contact this office should you require any assistance to conduct your research or require access to either staff or student contact information.

Yours sincerely

DR AHMED SHAIKJEE
DEPUTY REGISTRAR
UNIVERSITY OF THE WESTERN CAPE

UNIVERSITY OF THE WESTERN CAPE
ACADEMIC ADMINISTRATION
14 JULY 2020
This document contains a qualified electronic signature and date stamp. To verify this document contact the University of the Western Cape at researchperm@uwc.ac.za.

APPENDIX D: SCREENSHOT OF ONLINE APPLICATION TO THE UNIVERSITY



APPENDIX E: SUPPLEMENTARY MATERIALS

Table 1: Number and Percentage of Correct Responses on Individual Items of the Adolescent Depression Knowledge Questionnaire (*N*=308)

	CORRECT RESPONSE	n	%
Five percent of all teenagers will suffer a major depression	Yes	278	90.3
Depression runs in some families	Yes	262	85.1
Depression can be controlled through willpower	No	156	51.0
A change in behavior is a symptom of depression	Yes	245	79.5
There are certain groups of people who are immune to depression	No	259	84.1
Major Depression is a treatable medical illness	Yes	266	86.4
A person with depression always feels sad	No	196	63.9
The abuse of alcohol and drugs can be a sign of depression	Yes	290	94.2
Someone who has a major stress (like having parents get a divorce) always develops a depressive illness	No	195	63.3
Major depression is a major cause for suicide in 80% of all successful suicides	Yes	279	90.6

Table 2: Summary of Responses for Each Item on the DSS Questionnaire

	Strongly disagree n (%)	**Disagree n (%)**	**Neither disagree nor agree n (%)**	**Agree n (%)**	**Strongly agree n (%)**	**Total n (%)**
People with depression could snap out of it if they wanted.	123 (40)	72 (23)	61 (20)	33 (11)	19 (6)	308 (100)
Depression is a sign of personal weakness.	183(59)	74 (24)	28 (9)	11 (4)	12 (4)	308 (100)
Depression is not a real medical illness.	191 (62)	70 (23)	29 (9)	9 (3)	9 (3)	308 (100)
People with depression are dangerous	57 (18)	95 (31)	104 (34)	39 (13)	13 (4)	308 (100)
It is best to avoid people with depression, so you don't become depressed yourself	171 (55)	90 (29)	30 (10)	9 (3)	8 (3)	308 (100)
People with depression are unpredictable.	22 (7)	51(17)	101 (33)	105 (34)	29 (7)	308 (100)
If I had depression, I would not tell anyone	62 (20)	100 (32)	70 (23)	53 (17)	23 (8)	308 (100)
I would not employ someone if I knew they had been depressed.	134 (44)	112 (36)	47 (15)	11 (4)	4 (1)	308 (100)
I would not vote for a politician if I knew they had been depressed.	108 (35)	100 (33)	51 (20)	32 (10)	7 (2)	308 (100)

Table 3: Summary of the Participants' Help Seeking Intentions (GHSQ)

	Extremely Unlikely n (%)	**Unlikely n (%)**	**Likely n (%)**	**Extremely likely n (%)**	**Total n (%)**
Intimate partner	6 (2)	38 (12)	144 (47)	120(39)	308 (100)
Friend	25 (8)	66 (21)	150 (49)	67 (22)	308 (100)
Parent	39 (13)	97 (31)	98 (32)	74 (24)	308 (100)
Other relative	78 (25)	103 (33)	97 (32)	30 (10)	308 (100)
Mental health professional	17 (6)	40 (13)	135 (44)	116 (38)	308 (100)
Phone helpline	70 (23)	108 (35)	96 (31)	34 (11)	308 (100)
33. Doctor/GP	28 (9)	80 (26)	130 (42)	70 (22)	308 (100)
34. Religious leader	95 (31)	83 (27)	93 (30)	37 (12)	308 (100)
35. I wouldn't seek help from anyone	120 (39)	109 (35)	64 (21)	15 (5)	308 (100)

Table 4 Summary of the Participants' Perceived Mental Healthcare Needs during the Covid-19 Pandemic Questionnaire

	Yes **n (%)**	**No** **n (%)**	**Maybe** **n (%)**	**Total** **n (%)**
Do you think it would be nice to talk to someone about your worries for the Covid-19 viral pandemic?	215 (70)	22 (7)	71 (23)	308 (100)
Do you think it is necessary to get mental health help if one panics with regards to the Covid-19 pandemic situation?	243 (79)	10 (3)	55 (18)	308 (100)
Do you think it would be beneficial if mental health professionals help people in dealing with the current Covid-19 pandemic situation?	283 (92)	5 (2)	20 (6)	308 (100)
Will you suggest obtaining mental health help to people who are highly affected by the Covid-19 pandemic?	271 (88)	10 (3)	27 (9)	308 (100)