Relationship between Social Network Usage and the Mental Health of First-Year Students in a South African University

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ABSTRACT

The mental health of students remains a major public health concern. The increasing rate of social network site (SNS) usage in recent time has been identified as a major contributor to mental health challenges. There is, however, a paucity of empirical studies addressing this trend in South Africa. This study, therefore, investigated the relationship between social network usage, demographic factors and mental health of first-year students in a South African university.

A quantitative research approach with correlational design was utilized in the study. One hundred and thirty-two first-year students of the North-West University selected through a convenience sampling method participated in the study. The participants comprised 31.1% males and 68.9% females whose ages ranged between 18 and 32 years, with mean age being 20.98 years. The Beck Depression Index ($\alpha = 0.91$) was used to assess depressive symptoms while the Beck Anxiety Index ($\alpha = 0.94$) was used for the assessment of anxiety. SNS usage was assessed using the Social Network Time Usage Scale ($\alpha = 0.98$). Statistical analysis was conducted with SPSS v24 using the Pearson Product-Moment Correlation analysis.

The results indicated that there is no significant relationship between the use of SNS and depression ($r = .09$, $p>.05$) and anxiety ($r = .06$, $p>.05$). Further results showed that the participants mostly used SNS for relaxation and free periods. These findings suggest the use of SNS in positive or healthy ways can maintain good mental health.

The study suggests that positive use of SNS facilitates good mental health. It is, therefore, recommended that SNS usage should be encouraged in a non-problematic manner to maintain good mental health.

Keywords: *Anxiety, Depression, First-year student, Social network usage*

DECLARATION

I Mr Thabo Noah George van Wyk declare that the study titled *Relationship between social network usage and the mental health of first-year students in a South African university* is my work. I further declare that the sources have been properly cited and acknowledged.

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Thabo NG van Wyk

CERTIFICATION

I certify that this research was carried out by Thabo Noah George van Wyk, student number 26578352, of the Department of Psychology, North-West University (Mahikeng Campus), South Africa under my supervision.

Supervisor

Professor Choja A Oduaran

DEDICATION

This study is dedicated to Atlarelang van Wyk as an indication of the hard work, motivation, efforts and dedication in completing this study, members of my family, for their support and encouragement during my studies, and for being the pillar of my strength.

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First and foremost, I would give all gratitude to the Almighty. On days when my legs would give in, it was His words that kept me on my feet. Jeremiah 29:11.

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"My voice will echo in rooms they never thought I could occupy" – Thabo van Wyk

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ACRONYMS AND ABBREVIATIONS

BAI – Beck's Anxiety Inventory

BDI – Beck's Depression Inventory

COMPRES – Community Psychosocial Research

DSM-5 – Diagnostic Statistical Manual 5th Edition

DV – Dependent Variable

HREC – Health Research Ethics Committee

IV – Independent Variable

MV – Moderator Variable

NWU – North-West University

SNS – Social Networking Site

SONTUS – Social Network Time Usage Scale

SPSS - Statistical Package for the Social Sciences

WHO – World Health Organisation

CHAPTER ONE

INTRODUCTION AND BACKGROUND

INTRODUCTION

The first chapter of the study focuses on the subject topic that is discussed throughout the research. It will entail an introduction and background of the study, which will aim at providing a direction for the reader. The research problem statement emphasises key aspects that have not been previously covered by previous studies, which will provide the basis of the research aims, objectives and research question. The first chapter thus provides a perspective and direction of which key aspects are highlighted in the research.

1.1 INTRODUCTION AND BACKGROUND TO THE STUDY

Middle-to-low income countries have been the focal point of attention regarding mental health due to the low budget usually allocated to mental health (Meyer et al., 2019). Taking this into consideration, the social influences on mental health have to be noted. Mental health has been a growing interest over the last few years, more so the mental health of university students (Hernández-Torrano et al., 2020). Mental health within the South African context has not been treated as an important aspect of the health sector, which has raised concerns about the services offered to those who face metal health challenges (Nguse & Wassenaar, 2021). The onset for most mental health disorders is during early adulthood, which is the usual developmental age for most university students (Duffy et al., 2019).

The mental well-being of first year students has to be highlighted because of the transition into university (Hernández-Torrano et al., 2020) and anxiety levels have been

reported to be prevalent during pre-registration (Barrable et al., 2018). Their novel introduction to the university and their academic expectations bring about emotional distress (Bantjes et al., 2020). In addition, first-year students are faced with the challenges of being independent and to make life-changing decisions (Hernández-Torrano et al., 2020). University students have been identified as a vulnerable group because of the high levels of anxiety and depression that they experience (Browning et al., 2021). There are several contributing factors to their mental health such as the academic pressures and their new-found independence. There has been an increasing concern for university students' mental health, particularly in terms of providing them with the required support (Eloff & Graham, 2020), especially in a country where the mental health sector is only allocated 5% of the national health budget (Nguse & Wassenaar, 2021).

The presence and growth of Social Networking Sites (SNS) have brought about the obvious usage of them with their main users being young adults (ages 18-29) (Perrin, 2015), being a popular means of communication by millennials (Lad et al., 2020). The obvious growth in the use of SNS creates new fields of research. The growth in SNS usage has been described by Gwena et al. (2018) as a phenomenon that is designed to meet the needs of people coming into new environments or spheres. SNS thus provide individuals with the opportunity to easily meet new people and that may explain the increased popularity of their usage. Furthermore, Gwena et al. (2018) state that there is a need to share information with various people, and SNS provide the opportunity to do exactly that, and, as such, SNS have addressed the need to maintain relationships, to connect, and the need for entertainment.

Examining the changes of social media is imperative because of the impact that the different evolutionary stages may have on affected individuals. SNS have not always been accessible with computers because their evolution began with the telephone (Edosomwan et al., 2011). With SNS now being accessible through computers, there has been an increase in

their usage. Facebook, for example, has been dubbed a state nation due to its popularity with users being estimated around 1.71 billion (Clark et al., 2018).

According to Vadwa et al. (2016), there are an estimated 1.96 billion SNS users in the world, which indicates that SNS are widely used. This is predicted to increase to 2.44 billion by 2018 (Vadwa et al., 2016), and by 2022, the number is predicted to rise to 3.29 billion, accounting for 42.3% of the world's population (Appel et al., 2020). A study in a Nigerian University indicated the prevalence of use regarding a particular social network (Facebook). It found that 31% of the participants accessed their Facebook account every hour, and 22.3% accessed their account every two hours (Raju et al., 2015). In the United States of America, SNS usage is estimated to be prevalent amongst 88% of individuals between 18 and 29 years of age (Hruska & Maresova, 2020).

The increased usage of SNS has brought about mental health effects on society that should be considered. According to O'Reilly et al. (2018), internet usage, which can be synonymous with SNS usage, was seemingly connected to reduced face-to-face interactions and led to an increase in stress, depression, and a lack of sleep. Furthermore, one study which examined repeat survey data from 2013, 2014, and 2015 found a link between the level of self-reported Facebook use and future low self-reported mental health and life satisfaction (Abi-Jaoude et al., 2020). This thinking further contributed to the idea that excessive internet usage was a harmful behaviour that was not good for the mental health of an individual (O'Reilly et al., 2018).

Students face numerous challenges that seem to affect their mental health. These challenges include the academic pressure alongside the demanding workload, their worries about their general health, and financial concerns (January et al., 2018). These are risk factors that increase the likelihood of the development of a mental disorder. Additionally, Brown

(2018) stated that loneliness is a predictor for distress, and childhood trauma is a risk factor for poor mental health amongst university students. Furthermore, Lipson and Eisenberg (as cited in Brown, 2018)) found that students with mental health-related challenges tended to have anxiety about their academic performance and demands, as well as other factors related to their overall university experience. Barman et al. (2019) found other dependent variables that perpetuate mental health problems, whereas Berryman et al. (2018) found that mental health problems were already pre-existing before being perpetuated by SNS. For instance, one study found that some students used SNS to lessen their feelings of loneliness and anxiety, but the negative (excessive or inappropriate) use of SNS could worsen these pre-existing mental health-related challenges (Berryman et al., 2018).

During the year 2020, the World Health Organization (WHO) proclaimed the new Coronavirus Disease (COVID-19) a global pandemic upon its discovery at a wet market in Wuhan, China (Bueno-Notivol et al., 2021). Following this declaration, there has been a rapid shift in how people interacted with SNS and their mental health. The mental health of the global population has been negatively affected by COVID-19, as shown by the meta-analytic findings of Salari et al. (2020). Anxiety and depression were found to be prevalent in 31.9% and 33.7% of the population, respectively. COVID-19 may have made people more vulnerable to mental health disorders, according to these studies. These alarming figures have raised concerns about global mental health during and post-COVID-19. Poor mental health was observed to be higher in under-developed and developing countries due to the poor health care system and other pre-existing health related challenges (Salari et al., 2020).

The South African National Institute of Communicable Diseases (NICD) reported the first COVID-19 case in South Africa on the 5th of March 2020 (Staunton et al., 2020). During the first period of lockdown, around 33% and 45% of South African experienced depression and anxiety-related symptoms respectively (Nguse & Wassenaar, 2021). Naidu (2020) reported

that the COVID-19 trend observed internationally by the South African government has enabled the mitigation of catastrophic events by implementing psychological support. This highlights the availability of psychological services availed to the public throughout the COVID-19 pandemic. However, due to limitations on travel, and social isolation, there was a decrease in the usage and availability of mental health services, resulting in fewer in-contact sessions (Pillay & Barnes, 2020).

Poor mental health due to COVID-19 has been primarily due to misinformation associated with rumours accessed through a variety of communication mediums such as SNS (Salari et al., 2020). Due to restrictions in travelling and suggestions for social distancing, there was an increase in SNS use compared to the previous year when observing the South African population (Mwaura et al., 2020). The relationship between SNS use and mental health during COVID-19 was, however, not widely studied.

1.2 PROBLEM STATEMENT

There has been an increasing worry regarding university students' mental health around the world. The World Health Organisation conducted a survey across 21 universities, and found that 20.3% of the university students had had a psychiatric disorder during the past year (Kaminer & Shabalala, 2019). People have different experiences when they are in university and this may predispose or perpetuate existing mental health-related challenges. In a study conducted in a South African university, the prevalence of moderate depressive symptoms was found to be 7.2%, and severe depressive symptoms was found to be 4.0%. Moderate anxiety was found to be at 11.9% and severe anxiety symptoms were found to be at 3.9% (Bantjes et al., 2016).

Kaminer and Shabalala (2019) proposed that South African universities should develop policies aimed at promoting and maintaining the mental health of their students. Considering

the different social and economic factors that universities face, it is imperative to maintain a harmonious mental state of university students, especially considering their stages of development. It has been noted that there is a lack of support for the mental health of university students, as only a minority of them have access to mental health services (Eloff & Graham, 2020). Bantjes et al. (2019) and Eloff and Graham (2020) contextualised the issue of mental health by focusing on first-year students, when they proposed that more attention should be brought to bear on the psychological well-being of first-year students, considering their transition to tertiary education.

An increase in the use of SNS was noted by Topolovec-Vranic and Natarajan (2016), which has been associated with mental health. According to Hou et al. (2019), a variety of studies found that a prolonged use of SNS was found to be linked with stress, depression and anxiety. The relationship between SNS usage and mental health has been established (Deepa & Priya, 2020) although there is an ongoing debate about this correlation. Some studies have sought to indicate that SNS usage may have an adverse impact on students' mental health. It was emphasised that SNS usage was rather a cry for help for those who already had pre-existing mental illnesses (Berryman et al., 2018). However, it was further suggested that SNS usage made it easier for students to communicate about their academic lives (Boateng & Amankwaa, 2016). SNS use also gave undergraduate students the impression of a happier life, which lessened the depressive symptoms (Bhat, 2017).

It has been noted that more support for students' mental health should be rendered by different universities (Sawahel, 2020) and further information and education regarding SNS use should be availed.

There seems to be some confusion about the relationship between social network usage and mental health. O'Reilly et al. (2018) suggested that SNS usage led to decreased face-to-

face interactions which subsequently indicated mental health challenges. Barman et al. (2019) found that mental health challenges were pre-existent and were only perpetuated by SNS usage. Lastly, Berryman et al. (2018) indicated that the use of SNS use led to decreased feelings of loneliness, however the excessive use of SNS suggested feelings of anxiety. This is an indication that further studies have to be conducted within this focus area to fully understand the association between social media use and mental health. There has been limited research conducted in South Africa and especially in rural-based institutions such as the North-West University on the possible relationship between social network usage and mental health. This study, therefore, investigated the relationship between social network usage and the mental health among first-year students in a South African university.

1.3 RESEARCH QUESTIONS

The study aims to answer the following research questions:

1. What is the relationship between social network usage and depression?
2. What is the relationship between social network usage and anxiety?

1.4 AIM AND OBJECTIVES OF THE STUDY

The study aimed to determine the relationship between social network usage, and mental health of first-year students in a South African university.

The study fulfilled the following objectives:

1. To examine the relationship between social network usage and depression.
2. To examine the relationship between social network usage and anxiety.

1.5 SCOPE OF THE STUDY

The study will examine how social network usage relates to mental health amongst first-year undergraduate students. The independent variable (IV) of the study is social network usage while the dependent variable (DV) is mental health. These variables have been assessed through the use of self-report scales, and the study utilized a quantitative research approach. The biographical information of the students varies but they will have to be first-year students registered at the university and they have to use SNS.

1.6 RESEARCH RATIONALE

Studies that examine the relationship of SNS usage between the mental health of young adults have produced mixed results (Berryman et al., 2018). This has suggested that further studies have to be conducted to obtain a clearer picture of the relationship between the usage of SNS and mental health. Furthermore, the study has not only contributed to the already existing mixed results that previous studies have provided, but it has further brought to light the mental health challenges that young adults are facing. Additionally, SNS have been used as mental health interventions, as proposed by Ridout and Campbell (2018). It was, however, stated that the use of SNS as mental health interventions needs further studies to be conducted to find the efficacy of SNS usage as a possible intervention for mental health. It has been found that the appropriate use of SNS can help to alleviate feelings of loneliness and positively impact ones mental health (Berryman et al., 2018). This suggests that SNS use can be beneficial to mental health and serve as a medium for mental health interventions in the future. The findings may suggest that further studies into SNS and an intervention can be explored. The study has contributed further to the knowledge of which areas of mental health are affected by SNS usage and aided social network-based mental health interventions.

1.7 SIGNIFICANCE OF THE STUDY

The growth in SNS usage has brought about the interest of how it may impact various aspects of an individual's life, more specifically, their mental health. Therefore, this study will contribute to the ever-growing number of studies of SNS usage and its impact on the overall students' life experience by providing information about the relationship between the different variables.

Furthermore, the study will provide some perspective on the mental challenges that students face as a result of SNS usage. The findings of the study will give an idea of the relationship that SNS has with the mental health of university students. These findings will provide further suggestions on how good mental health can either be promoted or maintained among the students. According to Abi-Jaoude et al. (2020), clinicians may opt to promote a harm-reduction strategy, recommending decreased use of social media and the internet rather than abstinence by the youth, despite research that indicates extended use is related to poorer mental health.

The study results can assist in the implementation of a grassroots intervention for universities' first-year students. The knowledge gained can assist a university in addressing the mental problems of students while they are in their first year, rather than the students facing similar mental health challenges throughout their entire university career and into their post-academic life. Lastly, the field of psychology will benefit from knowledge of SNS usage and its relationship to mental health, which will contribute to the growing knowledge of other factors that have a relationship with mental health.

1.8 OPERATIONAL DEFINITION OF TERMS

These terms are used in the following context within the study:

- **Mental Health:**

The absence of mental sickness is regarded as Mental Health. Additionally, it can be defined as a state of being that encompasses biological, psychological, and social variables that influence an individual's mental state and ability to function. In this study, mental health refers to anxiety and depression.

- **Social networks:**

Refers to internet-based platforms that allow people from various backgrounds to communicate with one another and create social bonds and relationships. Social network usage was measured using the SONTUS, of which five components were used to describe the setting in which SNS usage was most prevalent. The sum of the five components provided an overall indication of SNS usage.

- **Anxiety:**

It is an intense and persistent worry or fear regarding everyday situations. This may result in an elevated heart rate, fast breathing, excessive sweating, and feelings of tiredness. The BAI was used to assess anxiety symptoms. The higher the score, the more severe the anxiety symptoms.

- **Depression:**

It is a persistently low mood or loss of interests in activities. This causes impairment in one’s life. The BDI was used to assess the severity of depressive symptoms. The more severe the symptom, the higher the score.

- **Internet:**

It is an international system that forms networks of interconnected computers with the aim of communication. In this study, the term ‘internet’ was mostly used in relation to SNS as they were accessed through the internet.

- **Students:**

Individuals who engage in learning with the aim of entering a particular profession. In the study, students refers to individuals enrolled in institutions of tertiary learning.

- **University:**

It is an institution that offers higher learning to grant academic qualifications.

1.9 CONCLUSION

The first chapter has argued the relevance and importance of researching the possible relationship between mental health and SNS usage. The conflicting results from previous studies further emphasise the importance of this study. The first chapter has therefore met the objective of thoroughly providing the direction that the study will take and the rationale behind the direction.

CHAPTER TWO

THEORETICAL FRAMEWORKS

INTRODUCTION

The second chapter will explore the theoretical framework of the study. Three theoretical perspectives were used to describe the direction that the study has taken. The theoretical perspectives mainly focus on the behaviour of students concerning their usage of SNS.

2.1 THEORETICAL FRAMEWORK

2.1.1 Social influence processes

2.1.1.1 Social influence process and social networks

Herbert Kelman proposed the social influence theory in 1958 (Kelman, 1958). The process states that people adopt a technology not only because of their own preferences, but also because of what other people think about it (Ifinedo, 2016). This implies that people's behaviour is, to some extent, shaped by the views of other people. As such, people seek to use SNS because other people are using them.

There are three types of social influence, which are compliance, identification, and internalisation (Ifinedo, 2016). Compliance is described as the individual agreeing with others. Identification is described as the individual accepting a particular type of technology because they want to begin or maintain a relationship that is satisfying and defining in correspondence with a particular social group. First-year university students can be described as experiencing the need to identify with other first-year students or existing students and may thus adapt their beliefs and behaviours to create new relationships and so develop a sense of belonging. The

final type of social influence is internalisation, where the individual accepts a particular technology because it correlates with their beliefs (Ifinedo, 2016). The students can use SNS because of a variety of beliefs that they may have assimilated with throughout their lives. This may be, for instance, be that they believe that they will be more accepted if they use SNS.

2.1.1.2 Social influence process and mental health

The primary basis of the social influence process perspective is that people adopt social behaviour because their peers exhibit that behaviour. According to Rickwood (2020), individuals who displayed help-seeking behaviour for their mental health challenges influence others to do the same. Conformity is often involved in the social influence process (Mason et al., 2007). As individuals conform towards the positive use of SNS, they may also conform to help-seeking behaviour. Furthermore, individuals are more likely to develop trusting behaviour (Wei et al., 2019), where they have a positive attitude towards the use of SNS and also a positive attitude towards addressing their mental health challenges. A positive attitude towards the two variables is thus beneficial in maintaining a positive outcome in the relationship between SNS use and mental health.

2.1.2 Uses and gratifications theory

2.1.2.1 Use and gratification theory and social networks

Blumler and Katz (1974) proposed the use and gratification theory. It is explained as a sociological theory that aims to illustrate why and how people may prefer certain SNS platforms to meet their demands (Ifinedo, 2016). The theory assumes that individuals are goal-oriented towards the use of media and as such, they link their needs and gratification towards SNS. There is, therefore, the assumption that students who use SNS as a communication medium seek to satisfy specific needs and goals such as eliminating anxiety and loneliness (Berryman et al., 2018).

2.1.2.2 Use and gratification theory and mental health

The thinking behind this theory is that, as students use SNS, they address their social needs, which results in the decrease of mental health challenges. Gratification for social needs has been reported to have a positive contribution towards uplifting the mood of people (Radovic et al., 2017). It has been said that using SNS to find positive information or for positive communication results in a better mood. In essence, the quality of SNS use influences the mental health of people. It was further argued that the frequency of use regarding SNS is less of a predictor for mental health as opposed to the setting and manner in which SNS are used (Davila et al., 2012). This suggests that the use of SNS can be beneficial towards maintaining or promoting good mental health depending on how an individual uses them. If an individual seeks to satisfy their social needs towards a positive direction, their mental health is more likely to improve.

2.1.3 Social learning theory

2.1.3.1 Social learning theory and social networks

The social learning theory was proposed by Albert Bandura (Bandura & McClelland, 1977). It takes the belief that individuals learn and model behaviour from others (Seligman & Reichenberg, 2014). It uses some fundamentals from the influential social theorist, Albert Bandura. Bandura stated that the behaviours that individuals exhibit tend to influence the environment that they exist in, and as such, their human experience is created. The social learning theory further emphasises that when individuals observe someone that they admire, they will partake in the challenging task that is more likely to encourage their efforts in performing the task (Seligman & Reichenberg, 2014). Therefore, students who use SNS may have learnt the behaviour from an admirable figure and, as such, they create their own experiences through modelled behaviour.

2.1.3.2 Social learning theory and mental health

From the social learning perspective, behaviour can be learnt to modify and influence the mental health of an individual (Nangle et al., 2010). For example, the social skills to deal with adversity and threats to mental health can be socially observed and adopted to maintain good mental health. These socially acquired skills can be reinforced by the individual, given that these are efficient in the maintenance of good mental health (Nangle et al., 2010). When individual observe and adopt positive social behaviour from their role models, they are more likely to implement these behaviours when they are faced with adversity (O'Dea et al., 2020). In essence, the thinking is that students who observe positive SNS use are more likely to have good mental health, as stated by Davila et al. (2012).

2.2 CONCLUSION

Social theories seem to explain the behaviour behind the use of SNS. It makes sense that social theories offer a clear explanation, considering that SNS are, in essence, a social phenomenon. The social influence process focuses on how the views of individuals are shaped by others. Individuals identify with their role models or close associates, and adopt their behaviours relating to SNS use and mental health practices. The uses and gratification theory explored the reason why these behaviours were adopted and which needs were met. Lastly, the social learning theory looked into how individuals then learn these behaviours and integrate them into their daily living. SNS are a social phenomenon and so is mental health. They are, to some extent, guided by our social factors.

CHAPTER THREE

LITERATURE REVIEW

INTRODUCTION

The literature review provides an extensive overview of the different constructs and variables of the study.

3.1 LITERATURE REVIEW

3.1.1 Depression

The history of depression has been well documented and traced back to ancient Greece. This indicates that the roots of depression have been well established and how it is currently known and understood. According to Horwitz et al. (2016), depression was first described as *Melancholia*. Melancholia was described and termed by Hippocrates, who described its symptoms as an aversion to food, lack of sleep, being irritable, restlessness and despondency (Horwitz et al., 2016). These symptoms share similarities with the symptoms written in the Diagnostic Statistical Manual 5th Edition (DSM-5) (American Psychiatric Association, 2013). The term 'melancholia' is still being used to describe an episode or episodes of depression, which is characterised by severe anhedonia (loss of pleasure) (Gorwood, 2008), waking up early in the morning, weight loss, and feelings of guilt (Sadock et al., 2015). Melancholia may stem from a change in the automatic nervous system and the endocrine system. This is the reason why melancholia may sometimes be referred to as depression that can arise with no external life stressors (Sadock et al., 2015).

University students usually face various challenges that may give rise to depressive symptoms. Some students may be on the transition from adolescence to adulthood, and this

presents its challenges. Additionally, the change in their schooling environment may be a daunting experience, which may further perpetuate depressive symptoms.

On a global scale, the prevalence of depression is estimated at 264 million people (WHO, 2020a). A meta-analysis conducted by Bueno-Notivol et al. (2021) found that the global prevalence of depression might be 7 times higher as a result of the COVID-19 virus. Within the South African context, a study conducted by Peltzer and Pengpid (2020) indicated that 47.3% of the participants displayed minimal or mild depressive symptoms, while 17.7% displayed mild to severe depressive symptoms. The prevalence of depression seems to be on the increase, and over two-thirds of university students do not talk about the mental health challenges that they face, or they simply do not seek any assistance (Sarokhani et al., 2013). In the South African context a study conducted by Bantjes, Lochner, Saal, Roos, Taljaard, Page, Auerbach, Mortier, Bruffaert et al. (2019) indicated that 24.7% of the first-year university student sample indicated depressive symptoms.

3.1.2 Anxiety

Anxiety is divided into two parts, which include 1) the awareness of physiological sensations as well as 2) the awareness of being frightened or nervous (Sadock et al., 2015). Those who experience anxiety can notice that they are sweating or that they are frightened.

Anxiety is known to affect ones' thinking, learning and perception, as it tends to cause a level of confusion, which not only occurs in time and space but also in the process of creating the meaning of events (Sadock et al., 2015).

Anxiety disorders can be seen or described as a family of mental disorders that are related but also distinct. These disorders include panic disorder, specific phobias, agoraphobia, social anxiety disorder, and generalised anxiety disorder (Sadock et al., 2015).

The global prevalence of anxiety disorders has been reported to be around 300 million (Rice-Oxley, 2019). A meta-analytic study was conducted by Wu et al. (2020), and it indicated that anxiety had a prevalence of 31.9% during the COVID-19 pandemic. Besides depression, counselling centres at universities and colleges have many students who present with anxiety symptoms. This is among the ever-growing challenges related to mental health (Pedrelli et al., 2015). Several sources have shown that the incidence of anxiety amongst university students ranges between 13% and 65.5% (Kamberi et al., 2019). This variation in the prevalence of anxiety is due to a variety of factors such as cultural context, resilience, and temperament. A study conducted in a South African university by Bantjes et al. (2016) showed that 84.2% of their sample reported low anxiety, 11.9% reported moderate anxiety, and 3.9% reported severe anxiety. Bantjes, Lochner, Saal, Roos, Taljaard, Page, Auerbach, Mortier, Bruffaert, et al. (2019) conducted another study and found that 20.8% of the first-year student sample reported anxiety symptoms.

3.1.3 Social Networks

According to Edosomwan et al. (2011), social networks began with the telephone before they were accessible and widely used on computers. This led to homemade electronic devices being used to gain unauthorised access to free telephone calls. Social networks shifted from being accessible through telephones to being used with computers. The transformation led to the development of various SNS in the 1990s (Edosomwan et al., 2011).

The emergence of SNS has created a level of confusion amongst the public. The main confusion is the use of the words ‘social networks’ and ‘social media’. Social media has to be termed with its primary function, which is to communicate. Thus, social media is used to share information with a wide audience (Edosomwan et al., 2011). Social networks can be defined and explained as an activity that requires some engagement from people with a common

interest (Edosomwan et al., 2011). SNS create a virtual community where people associate together.

According to M Tajuddin et al. (2013), SNS usage amongst the community of university students has been increasing due to their increased popularity. One of the reasons behind this increased usage is because students use SNS as a way to validate their values (M Tajuddin et al., 2013). They seek to empower themselves through the use of SNS. It is estimated that 22.89 million people in South Africa use SNS (Statista, 2020) and in a study conducted in two South African universities, 72.3% of the respondents reported using the internet (Salubi et al., 2019).

3.1.4 Social Network Usage and Mental Health

Modern culture has integrated the use of social network in people's daily lives. There has been an observed relationship between the use of SNS and mental health, and this relationship has brought about great debates. Arguments about the positive and negative aspects of the use of SNS have been polarised. with different studies providing different results.

Hou et al. (2019) stated that a variety of studies found that the prolonged use of SNS is associated with stress, anxiety and depression. A systematic review revealed that the results from studies on the use of SNS and its association with depression and anxiety were mixed, although there seems to be a correlation between social network usage, and mental health and well-being (Seabrook et al., 2016). According to Pantic (2014), a 1998 study was one of the earliest to explore the relationship between the internet (social network) and human behaviour. According to the research, more time spent online is linked to less interaction with family members and a shrinking social circle among internet users, which could contribute to feelings of despair and loneliness. This experiment was followed by a number of subsequent studies, in

which it was indicated that computer use could have a negative impact on children's social development (Pantic, 2014).

Seabrook et al. (2016) indicated that when SNS are used in settings that facilitate positive interactions, social support and connectedness, lower levels of depression and anxiety were observed. Similarly, social comparison and negative interactions were linked to high levels of depression and anxiety. Additionally, the overall use of SNS suggested less loneliness and higher self-esteem and satisfaction with life (Seabrook et al., 2016). Similarly, an increased risk for depression and anxiety was noted based on the time spent on SNS (Karim et al., 2020). Anxiety was, however, linked rather to the type of activity of SNS use than the time spent on them. Depression was more positively correlated with the time spent on SNS. A systematic review of research articles has found that there is a relationship between SNS usage and depression (Keles et al., 2019).

Another study conducted on medical students in Kolkata, West Bengal, found that most of them used SNS; nearly 24% reported having depressive symptoms and 68.5% presented with anxiety (Barman et al., 2019). There is a growing concern regarding the prevalence of smartphones and SNS amongst students. A correlation between the time spent on SNS and depression and anxiety exists (Cain, 2018). According to Strickland (2014), SNS usage is more prevalent amongst individuals between the ages 18 and 29, and many of the known psychiatric conditions develop between the ages of 18 and 24. Additionally, late adolescence and early adulthood are periods where a higher prevalence of depressive symptoms become apparent (Bantjes et al., 2016). According to Keles et al. (2019), a meta-analysis of 23 studies indicated that there is a correlation between problematic SNS usage and psychological distress amongst adolescents and young adults. This emphasises that the usage of SNS is more prominent amongst college-aged individuals and so are mental health-related challenges. Deepa and Priya (2020) conducted a study with 90 MBA students as the sample, and found that the symptoms

of anxiety and depression were interlinked and confirmed that both the time spent (more than four hours) on SNS and how they used SNS influenced their mental health. There are indications that mental health challenges are more related to the methods and settings in which SNS are used. Furthermore, the time spent on SNS influences the way in which people use them, either positively or negatively.

A study conducted by Berryman et al. (2018) showed that SNS usage is a poor predictor of mental health-related challenges. The study found that SNS usage might be a cry for help for individuals who already had existing mental health-related challenges. Furthermore, the study found that the usage of SNS is not a critical element when considering mental health. How individuals use SNS seems to be more of a good predictor of the development or perpetuation of mental health-related challenges. In a randomized study of 120 college students, those who scored high on the tendency to engage in social comparison based on measures from a validated scale had poorer self-perception, lower self-esteem, and more negative affect after browsing the Facebook profile of an acquaintance compared to those randomized to the control conditions had poorer self-perception, lower self-esteem, and more negative affect after browsing the Facebook profile of an acquaintance (Abi-Jaoude et al., 2020). Therefore, the studies indicated that negative usage of SNS is a good predictor of mental health-related challenges.

Moreover, another study conducted by Aydogan and Buyukyilmaz (2017) found that the duration and intensity of SNS usage cause a significant increase in anxiety. The study was conducted using a sample from the Karabuk University of students from the Faculty of Business Administration.

Ahmad et al. (2018) conducted another study that focused on the use of SNS and how they correlated with depression among university students. Their sample consisted of

undergraduate students at the University of Peshawar and the University of Swat, and 200 students participated in the study. Their study found that students who spent a lot of their time using SNS had higher levels of depression. They further found that male students presented with depression more than female students did. Another major finding of the study was that individuals who used SNS for searches and not for communicating (chatting) presented higher levels of depression.

Bashir and Bhat (2017) compiled a review article on the effects of SNS on mental health. According to them, 45% of the British population are restless when they are not using SNS. This is most prevalent amongst young individuals. Bashir and Bhat (2017) further stated that the excessive use of SNS usually begins with anxiety, which is then followed by depression. Excessive use of SNS has also been found to contribute to feelings of loneliness. The mental health-related challenges that individuals present with are usually caused by the negative use of SNS.

Additionally, the review found that negative social interactions contributed to a depressed mood and suicidal ideation (Bashir & Bhat, 2017). However, healthy social interactions were a predictor of good mental health. Social interactions are described as social support that is offered by an individual's friends or family. The research article pointed out that young individuals are more at risk of developing possible chronic mental health-related challenges from the use of SNS.

3.2 SUMMARY OF LITERATURE

Literature on SNS has shown that there is a considerable and noticeable increase in its usage. The rising number of different SNS and apps has influenced this increase. Furthermore, these SNS and apps are easily accessible and can be used in a variety of settings.

The use of SNS has had a considerable influence on individuals. This influence has opened questions and explorations into their relationship with mental health. One area of mental health that has caught some attention is depression.

Depression has been studied dating from ancient Greek philosophers. One particular Greek philosopher who identified some symptoms that can be used to describe the presentation of depression is Hippocrates. He termed these symptoms and presentation *Melancholia* and described that individuals presented with an aversion to food, the lack of sleep, and being irritable, amongst others (Horwitz et al., 2016).

As university students face several difficulties due to a change of environment from their normal secondary schooling, they may be vulnerable to presenting depressive symptoms. The incidence of depression amongst students has been on a constant rise and it has been identified that these students do not normally seek assistance (Sarokhani et al., 2013).

Anxiety can be seen from two points, which are awareness of physiological sensations and nervousness, and actually being frightened (Sadock et al., 2015). These can affect multiple aspects of an individual, which include thinking, learning, and perception. With learning being one of the areas that are affected, anxiety is thus quite prevalent amongst university students. It has been reported to be the second biggest reason why students often go to their university's counselling centres, with occurrences ranging between 13% and 65.5%. A study conducted in a South African university showed that severe anxiety was reported among 3.9% of their sample (Kamberi et al., 2019).

Several studies have been undertaken in order to determine whether there is a link between social network usage and mental health, or whether SNS have an impact on mental health. In one study, it was found that the usage of SNS was a poor predictor of mental health-related challenges. The use of SNS was rather a cry for help for people who had pre-existing

mental health challenges. Furthermore, it was found that how individuals use SNS is a predictor of the development or perpetuation of poor mental health. For instance, the negative use of SNS is a predictor of mental health-related challenges.

Another study conducted at Karabuk University found that the intensity of SNS usage leads to an increase in anxiety, while another University study found that SNS usage correlates with depression (Aydogan & Buyukyilmaz, 2017).

A study conducted using the British population found that SNS usage was most prevalent amongst young individuals (Bashir & Bhat, 2017). Furthermore, SNS usage was found to influence the presence of anxiety and depression, and also contributed to feelings of loneliness. Suicidal ideation was also found to be present with the use of SNS (Berryman et al., 2018).

3.3 CONCLUSION

The literature review expanded on the social perspective of the study by exploring previous empirical findings for each of the proposed variables. Conflicting findings did indicate the importance of the study. Despite the confusion regarding the findings, the variables were explored and explained to provide a clearer picture about them and their importance in the study.

CHAPTER FOUR

RESEARCH METHODOLOGY

INTRODUCTION

Chapter four reports the intricate details of how the study was conducted. The main premise of this chapter is the methodology that was applied throughout the study. A quantitative approach was applied which required a variety of statistical procedures, which is further explained throughout the chapter.

First-year students were chosen as the study's sample in order to achieve the study's goals. Their data was collected through a battery of assessments for mental health and a scale measuring their SNS usage. Additionally, their biographical information was collected to provide further clarity into the research questions and provide the study with a better foundation and concrete findings.

4.1 RESEARCH APPROACH

Quantitative research approach for the study was used. This approach was used because of its statistical properties and the methods of data analysis as explained by Terreblanche et al. (2014). Quantitative research is defined as an empirical research approach that focuses on a social phenomenon or a human problem, and a theory that consists of various variables can be tested (Yilmaz, 2013). The social phenomenon that was explored and examined throughout the study focused on the theories of human behaviour, taking into consideration the students' SNS usage. This was coupled with the possible mental health challenges that arose due to the SNS usage and as such, the quantitative approach was fitting for the context of the completed study. Furthermore, quantitative research also views the psychological and social phenomenon as an objective reality that is separate from the participants (Yilmaz, 2013).

4.2 RESEARCH DESIGN

The study employed a correlational research design. A correlational design was utilised to find a possible relationship between mental health and social network usage. The study variables were analysed through the use of description analysis.

An online questionnaire was developed to collect data from first-year students. This enabled them to complete the questionnaire in a setting of their choosing that was most convenient and comfortable. Their privacy and anonymity were also ensured.

4.3 RESEARCH SETTING

The study was conducted online. The data was collected from the NWU Facebook pages and the NWU student portal (eFundi). Lecturers of first-year students were contacted via email to give assistance in distributing the study on their student portals.

4.4 PARTICIPANTS

The participants were first-year students at the NWU Mafikeng campus. First-year students were chosen because of their stage of development and transition into tertiary education. Furthermore, they were selected because of the possible mental health challenges that thy might face during this transition. Furthermore, SNS are used as a means of communication and may thus either perpetuate pre-existing mental health challenges or make their transition into university easier. A total of 132 participants were used in the study with the mean age of 20.98. 31.1% of the participants were male, and 68.9% female. The largest percentage of the participants (34.1%) were registered in the Faculty of Law, while 18.9% were registered in the Faculty of Humanities, 18.9% were registered in the Faculty of Economics and Management, 13.6% were registered in the Faculty of Natural and Agricultural Sciences, 8.3% in Education, 5.3% in Health Sciences and 0.8% in Theology.

4.5 SAMPLE AND SAMPLING TECHNIQUE

A sample is defined as a portion of a target population which further forms an unbiased representation of the selected population (Suresh et al., 2011). The population of this study consisted of first-year students from the NWU, Mafikeng Campus. The participants were selected via non-probability convenience sampling. The participants were chosen based on their availability and the ease with which they could participate, meaning that the participants were selected based on whether they were free to complete the online questionnaire at a time that is convenient for them.

4.5.1 Sample size calculation

Taro Yamane's sample size formula was used to calculate the sample size of the research.

$$n = \frac{N}{1 + N(e)^2}$$

n= the sample size

N= the size of the population

e= sampling error (usually .10, .05, and .01) (Yamane, 1973)

The sampling error of .10 and a confidence level of .95 will be employed for the calculation of the sample.

$$n = \frac{3465}{1 + 3465(0.1)^2}$$

$$n = \frac{3465}{35.64}$$

$n = 97.22$

The NWU Mafikeng Campus has a total of 3465 first-year students who are currently enrolled for the 2019 academic calendar year. As such, the sample for the study was 120 first-year undergraduate students. This number was chosen to accommodate the sampling error.

4.5.2 Sample inclusion criteria

First-year students had been considered because of their transition into the university environment and how they were perceivably reliant on SNS to make the transition easier. In addition, SNS usage by undergraduate students has been rapidly increasing (Sutherland et al., 2018) and this has been synonymous with mental health. The inclusion of university students from the NWU is because there is limited research of this kind in a South African university. Additionally, the use of first-year students is because they were a sample of interest given their transition into tertiary education and because the study is of a limited scope so the inclusion of a broader sample would not be suitable for the dissertation. Furthermore, the inclusion of students who use SNS was aimed at meeting the objective of exploring the relationship of SNS usage to their mental health.

The participants met the inclusion criteria which were 1) being registered as a first-year student at the NWU, Mafikeng Campus, 2) being an active social network user and 3) being above the age of 18 to accommodate the legal age of consent.

4.5.3 Sample exclusion criteria

The exclusion criteria were 1) students who are not in the first-year undergraduate level, 2) psychology students, because of the potential risk of a dual relationship and conflict of interest and 3) those who voluntarily chose not to participate in the study.

4.5.4 Recruitment

The recruitment of the research participants took place on social networking sites. The research purpose and requirements were posted on Facebook and the eFundi site. The research participants were allowed to privately message the researcher through the social networking site if they had any queries. The recruitment of the research participants took place until the sample size had been reached.

4.6 RESEARCH INSTRUMENTS

4.6.1 Biographical information

The participants completed a biographical form, which was part of the data collection process. The biographical information consisted of the participant's age, gender, and field of study.

4.6.2 Anxiety

Anxiety was assessed using the Beck's Anxiety Inventory (BAI). It is a 21 item self-report inventory which has a Likert scale that ranges from 0 to 3, where the sum of the scores is acquired and this indicates the level of severity of anxiety (Piotrowski, 2018). It is, however, subject to limitations such as anxiety in isolation to its different presentations (Muntingh et al., 2011). In other words, other anxiety disorders cannot be assessed using the BAI.

The BAI was found to be psychometrically sound as it scored between .92 and .94, and the test-retest reliability was found to be .75 at an interval of a week when it was administered to adults (Bantjes et al., 2016). The instrument was used by Bantjes et al. (2016) in the study of symptoms of post-traumatic stress, depression, and anxiety as predictors of suicidal ideation among South African university students. The reliability coefficient attained from this study was 0.94.

4.6.3 Depression

To assess the depressive symptoms, the Beck's Depression Inventory (BDI) was used. The BDI assesses the intensity and severity of depressive across a diverse sample (Toledano-Toledano & Contreras-Valdez, 2018). It consists of 21 self-report items that focus on cognitive, affective and somatic features of depression (Zozulya, 2016). The 21 items have a scale of answers ranging from 0 to 3, which are summed to provide an indication of the severity of depressive symptoms.

The BDI has been described to be psychometrically sound with its internal consistency ranging between .92 and .94 when measured through Cronbach's alpha at a week's interval. It was also found to be reliable as it scored .75 (Bantjes et al., 2016). The reliability coefficient attained from this study is 0.91.

4.6.4 Social network usage

The Social Networking Time Usage Scale (SONTUS) was used to assess the length of time spent on SNS and the settings in which the participants mostly used the SNS. It consists of 29 items arranged along a Likert scale of 11 responses (Olufadi, 2016). SONTUS focuses on the use of SNS within the following components: 1) relaxation and free periods, 2) academic-related periods, 3) public-places-related use, 4) stress-related use, and 5) motive for use. Scores from the components are then added and interpreted into the severity of the SNS usage (Olufadi, 2016).

The SONTUS reliability was examined using Cronbach's Alpha, which was found to be .92. The validity of the scale was found to be .26 and .43 when the scale was related to academic activities (Olufadi, 2016). For this research, a pilot study with 101 participants was conducted to find the reliability and validity of the scale's use within a South African context, more so in a university setting.

Reliability

Table 1. Reliability coefficients of Global and subscales of SONTUS.

	Cronbach's Alpha	Number of items
Global SONTUS	0.91	29
Relaxation and free periods subscale	0.74	9
Academic-related periods subscale	0.77	6
Public-places-related use subscale	0.70	5
Stress-related periods subscale	0.83	5
Motives for use subscale	0.65	4

Cronbach's alpha values for each of the subscales of the Social Networking Time Use Scale (SONTUS) were: 0.74 for the relaxation and free periods subscale, 0.77 for academic-related periods subscale, 0.70 for the public-places-related use subscale, 0.83 for stress-related periods subscale and 0.65 for motives for use subscale. The value for the total instrument (global SONTUS) was 0.91 (see Table 1).

This shows that the SONTUS was found highly reliable in terms of internal consistency among the target population in South Africa. The reliability coefficient attained from the study was 0.98.

Item-total subscale correlations and inter-correlation

Table 2. Item-total subscale correlations of Global and subscales of SONTUS.

	Item-total coefficients (range)
Global SONTUS	0.27 - 0.61
Relaxation and free periods subscale	0.24 - 0.56
Academic-related periods subscale	0.35 - 0.64
Public-places-related use subscale	0.38 - 0.53
Stress-related periods subscale	0.55 - 0.74
Motives for use subscale	0.38 - 0.45

As demonstrated in Table 2, correlational analyses were done between items and total subscales to determine the degree to which the items for each subscale capture certain qualities or homogeneity. The global SONTUS score item-scale correlations ranged from 0.27-0.61. Item-scale correlation ranged from 0.24 - 0.56 in the relaxation and free periods subscale, 0.35 - 0.64 in the academic-related periods subscale, 0.38 - 0.53 in the public-places-related use subscale, 0.55 - 0.74 in the stress-related periods subscale, and finally, 0.38 - 0.45 in the motives for use subscale.

Table 3. Summary of Pearson Correlation between the subscales and global SONTUS

		1	2	3	4	5	6	Mean	SD
1	relaxation and free periods	-						3.72	1.43
2	academic-related periods	.61**	-					2.07	1.08
3	public-places-related use	.57**	.56**	-				1.64	.83
4	stress-related periods	.43**	.49**	.34**	-			2.30	1.11
5	motives for use	.43**	.42**	.44**	.41**	-		1.84	.80
6	Global SONTUS	.84**	.82**	.74**	.72**	.67**	-	11.57	4.03

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

There were strong and significant correlations between the subscales scores and the total score of SONTUS, with correlations ranging between 0.67 and 0.84 ($p < 0.01$). However, moderate and significant correlations were found between subscales scores ranging from 0.34 to 0.61 ($p < 0.01$). See Table 3.

Table 4: Reliability coefficients of SONTUS during the main study

	Cronbach's Alpha	Number of items
Global SONTUS	0.98	29
Relaxation and free periods component (2,6,7,12,14,21,22,24,26)	0.94	9
Academic-related periods components (1,5,10,13,28,29)	0.89	6
Public-places-related use component (4,9,17,19,23)	0.86	5
Stress-related periods component (3,8,15,16,27)	0.93	5
Motives for use component (11,18,20,25)	0.87	4
BDI	0.91	21
BAI	0.94	21

The overall reliability coefficients of the instruments indicate that the participants responded in a consistent and truthful manner. Reliability errors were not observed throughout the analysis of the data. This suggests that the results are truthful.

4.7 PROCEDURE FOR DATA COLLECTION

Online self-report questionnaires were used to collect data. The collection of data ceased once the target number of participants had been reached. No identifying information was collected from the participants, as anonymity and confidentiality were maintained. The additional information that was collected consisted of their age, the field of study and gender

to contribute to the demographical data that was analysed. An incentive of R10 worth of data was given to the research participants to reimburse them for the mobile data they had used to complete the online questionnaires.

The collected data was electronically stored in a flash drive in a locked cabinet in the office of the research supervisor should it be required. The data will be stored for a maximum of 7 years after which it will be destroyed.

4.8 DATA ANALYSIS

The Pearson Product-Moment Correlation SPSS was used to analyse the relationship between the different variables. The Pearson Product-Moment Correlation SPSS was used because it measures linear association (Puth et al., 2014). Data collected from the demographic sheet has been subjected to descriptive analysis. As such, the variables on the demographic sheet were analysed in the form of percentages, mean and standard deviation. The Pearson Product Moment Correlation was employed to test the relationship between SNS usage (relaxation and free periods, academic-related periods, public-places-related use, stress-related periods, and motives for use) and mental health (depression and anxiety). Furthermore, the t-test analysis was used for the analysis of SNS usage and gender. A t-test is a statistical test that is used to compare the means of two groups (Kim, 2015). Results were accepted at 0.05 significant level ($p < 0.05$).

4.9 ETHICAL CONSIDERATIONS

Several ethical areas were considered throughout the study. Ethics are defined as the differentiation between what is right and wrong and this offers basic guidelines (Resnik, 2011).

The research proposal was presented to the Psychology Department at the NWU, Mafikeng campus. Following the presentation, the proposal was approved by the Community

Psychosocial Research (COMPRES) for scientific clearance. The approval from COMPRES was followed by the proposal being sent to the Health Research Ethics Committee (HREC) for ethical clearance. The university registrar approved the participation of first-year students in the study.

Once the Ethics committee and the University Registrar had permitted the study to take place, the research participants were randomly selected based on their willingness to participate in the research. The research was advertised on the student portal (eFundi) as well as on Facebook, where the purpose of the research as well as the inclusion criteria were stated on the online advertisement. The participants provided consent before they commenced filling in the research questionnaires. The consent form included the researcher's contact information in case the subjects had any questions.

The dissemination of the research results will be published once the research has been completed. Furthermore, the participants provided their email address when they filled in the forms online. The email addresses that the participants provided will be used to provide them with feedback and results about the research.

The informed consent form provided the participants with knowledge about the study that they were about to participate in. An independent individual, preferably someone within the field of psychology, will with the study. This limited bias and encourage objectivity. The form included information on the study's purpose, so participants knew what their data will be used for. Furthermore, the informed consent form emphasised that the participants can voluntarily participate in the research and they can terminate their participation at any time. The participants were also informed that their data will remain anonymous and that it will be kept safe.

Furthermore, the data collection instruments that were used in the research may evoke certain psychological problems. As such, the participants were informed of psychological services that are available to them

4.9.1 Benefits

A direct benefit of the study is the possible awareness that the participants have about their SNS usage and how that may relate to their mental health. An indirect benefit of the study is the possible development of other intervention strategies based on the findings of the study, as the findings from the research will contribute to the growing research regarding SNS and their influence on mental health. Additionally, the study will contribute to the already existing perspectives formed about the mental health challenges that students come across.

4.9.2 Risk

Risk regarding the research is mainly the possibility of evoking negative emotions that the participants may have had regarding possible incidents that took place because of SNS usage. Additionally, in defining depression or anxiety, the participants who are not aware of the definitions of both might develop more anxiety about the shortcomings of their results on both the BDI and BAI. In such an instance, the participants will be referred for psychological assistance at Ipelegeng Family and Child Care Unit at the university. Furthermore, there is a risk the research participants may experience a physical risk in the form of fatigue that would result in filling out the lengthy questionnaires as well as the accompanying boredom that will result from the lengthy procedure. The participants had the freedom to complete the questionnaire in a setting of their choosing and to take as much time as they needed. This helped alleviate the boredom and fatigue that they might experience as a result of completing the online questionnaires.

4.10 CONCLUSION

The correlational research design that was used served an important purpose in seeking how the IV and the DV influenced each other. This influence (relationship) would be easier to understand through a quantitative approach.

The entirety of the research methodology was constructed with the aim of making the study easier to comprehend. Additionally, it followed the methodology of most previous empirical studies with the hopes of contributing to the areas of SNS and mental health. The population and sample had to be limited, because of the nature of the study was a mini-dissertation. However, this will not prevent the study from contributing greatly to the field of research.

CHAPTER FIVE

PRESENTATION OF RESULTS

INTRODUCTION

The data analysis and interpretation of the study's findings are presented in this chapter. A total number of 132 questionnaires administered to first-year students of the North-West University, South Africa were subjected to the Statistical Package for Social Sciences (SPSS v23) for statistical analysis. Both descriptive and inferential statistics were conducted to address the study objectives.

The results obtained are presented below.

Table 5. Socio-demographic Characteristics of Participants

Variables		Frequency	Percentage
Age in years	Minimum age = 18; Maximum age = 32 Mean = 20.98; SD = 2.74		
Sex	Male	41	31.1
	Female	91	68.9
Faculty	Economics and Management	25	18.9
	Education	11	8.3
	Health Sciences	7	5.3
	Humanities	25	18.9
	Law	45	34.1
	Natural and Agricultural Sciences	18	13.6
	Theology	1	.8
Total		132	100

Results of the descriptive statistics presented on table 5 showed that the participants were aged between 18 and 32 years, with a mean age of 20.98 (SD 2.74) years. More females (68.9%) than males (31.1%) participated in the study. Also, the statistics on the distribution of the participants across the faculties showed that 18.9% of the participants were students from Economic and Management, 8.3% were from Education, 5.3% from Health Sciences, 18.9% from Humanities, 34.1% from Law, 13.6% from Natural and Agricultural Sciences, while only 0.8% of the participants were from the Faculty of Theology.

OBJECTIVE ONE:

The first objective of the study was to examine the relationship between social network usage and depression. The results obtained are presented in Table 6.

Table 6. Bivariate correlation among social network usage and depression

S/N		1	2	3	4	5	6	7	Mean	SD
1	Social network usage	-							9.02	5.18
2	Relaxation and free periods	.96**	-						2.50	1.92
3	Academic-related periods	.89**	.79**	-					1.69	1.09
4	Public places-related use	.87**	.78**	.81**	-				1.47	0.85
5	Stress-related periods	.88**	.81**	.72**	.71**	-			1.80	1.08
6	Motive for use	.89**	.86**	.70**	.72**	.74**	-		1.56	0.76
7	Depression	.09	.10	.07	.04	.11	.05	-	13.71	11.25

**p<.001

The results presented in table 6 showed the summary of the relationships among the social network usage components and depression. The results showed that there was no significant relationship between the overall SNS usage and depression (r = .09, p>.05) among the first-year students of North-West University, South Africa. A further analysis into the relationship among the specific patterns/dimensions of SNS usage and depression among the participants indicated that depression was not significantly associated with relaxation and free periods (r = .10, p>.05), academic-related periods (r = .07, p>.05), public places-related use (r = .04, p>.05), stress-related use (r = .11, p>.05), and motive for use (r = .05, p>.05) of social networks among the participants. The results imply that the rate and pattern of SNS usage do not have a significant relationship with depression (mental health) among the first-year students of NWU.

OBJECTIVE TWO:

The second objective of the study was to examine the relationship between social network usage and anxiety. The results obtained are presented in Table 7.

Table 7. Bivariate correlation among social network usage and anxiety

S/N		1	2	3	4	5	6	7	Mean	SD
1	Social network usage	-							9.02	5.18
2	Relaxation and free periods	.98**	-						2.50	1.92
3	Academic-related periods	.91**	.85**	-					1.69	1.09
4	Public places-related use	.91**	.86**	.87**	-				1.47	0.85
5	Stress-related period	.91**	.86**	.77**	.75**	-			1.80	1.08
6	Motive for use	.94**	.93**	.78**	.82**	.83**	-		1.56	0.76
7	Anxiety	.06	.08	.06	-.01	.08	.03	-	14.64	13.21

Table 7 presented the results of correlation analysis showing the relationships among the SNS usage and anxiety among the study participants. It was revealed from the results that there was no significant relationship between the overall SNS usage and anxiety ($r = .06$, $p>.05$) among the first-year students of North-West University, South Africa. In a similar outcome, the results of the analysis into the relationship among the specific patterns/dimensions of SNS usage and anxiety among the participants showed that anxiety was not significantly associated with relaxation and free periods ($r = .08$, $p>.05$), academic-related periods ($r = .06$, $p>.05$), public places-related use ($r = -.01$, $p>.05$), stress-related use ($r = .08$, $p>.05$), and motive for use ($r = .03$, $p>.05$) of SNS among the participants. The results imply that the rate and pattern of SNS usage do not have a significant relationship with anxiety (mental health) among the first-year students of NWU.

OTHER FINDINGS

Table 8. Independent samples t-test showing gender difference on social network usage

Gender	**N**	**Mean**	**SD**	**Df**	**t**	**p**
Male	41	9.22	5.27	130	.30	>.05
Female	91	8.92	5.17			

The results presented in table 8 revealed that there was no significant gender difference on SNS usage $t (130) = .30$, $p >.05$. This implies that a similar overall rate and pattern of usage of the SNS was reported by both the male ($M = 9.22$, $SD = 5.27$) and female ($M = 8.92$, $SD = 5.17$) participants.

Table 9. Descriptive Statistics for SONTUS Components (n = 132)

Component	M	SD
Relaxation and free periods	2.50	1.92
Academic-related periods	1.69	1.09
Public places-related use	1.47	0.85
Stress-related period	1.80	1.08
Motive for use	1.56	0.76
Time spent on the social network	1.80	1.14

The descriptive statistics for the time spent on SNSs was presented on table 9. The overall time spent on SNSs score (M = 1.80, SD = 1.14) was calculated by averaging the scores for the five SONTUS components (relaxation and free periods, academic-related periods, public places-related periods, stress-related period, and motive for use). The results showed that the highest time spent on SNS was for relaxation and free periods (M = 2.50, SD = 1.92) compared to time spent on public places-related use (M = 1.47, SD = 0.85) which the participants reported the least time on. The results also showed that more time was spent on stress-related use (M = 1.80, SD = 1.08) when compared with other related periods use, except for relaxation.

SUMMARY OF RESULTS

The results indicate that there is no significant relationship between the IV (Social network use) and DV (Mental health). Different components from the SONTUS further indicated that the use of SNS in different settings also had no significant relationship between the mental health of first-year students. A strong reliability coefficient suggests that the responses were consistent and truthful, which indicates that the results correlate with the research objectives.

CHAPTER SIX

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

INTRODUCTION

The final chapter of this study focuses on the research discussion and recommendations. It seeks to argue and defend the findings of the study in line with the literature of the study. Limitations are addressed for reference for future similar studies.

6.1 DISCUSSION

The results indicated that there is no significant relationship between social network usage and the mental health of first-year students. Different components of the SONTUS were further analysed in correlation to depression and anxiety, and the analysis further indicated that there was no significant relationship between the different settings of SNS use and mental health.

Topolovec-Vranic and Natarajan (2016) highlighted that the use of SNS has been on the increase over the years. Great advancements and achievements in technology have made this happen, with people finding it easier to socially connect and communicate. This has been more apparent when the world was affected by COVID-19. Social influence process theory stated that people adopted a particular technology because other people were using it. This was apparent during the COVID-19 pandemic when people relied heavily on the use of SNS for communication. This led to the adoption and the widespread use of SNS.

Various nations have tried to contain the spread of this infectious virus though physical distancing (Wong et al., 2020) which limited face-to-face interactions. During this time, SNS platforms witnessed an increased growth in users as people resorted to their use for academic, occupational, and social reasons.

An increase in SNS usage during the pandemic has led to a decline in mental health amongst developed countries. Tsao et al. (2021) cited that the increased usage of SNS in China has been associated with mental health-related challenges among the Chinese population. They further cited that this has been the trend for countries such as Canada. Developed countries have better access to the internet due to better infrastructure and financial accessibility to the services. As such, the use of SNS is much higher than in developing countries.

South Africa is still a developing country where the access to internet usage is made difficult due to the high rates of poverty (55.5%) and unemployment (29%) (Kim et al., 2020). Internet usage in South Africa has increased over the years; however, it is still exponentially low compared to other economic powerhouses across the African continent such as Egypt and Nigeria (Lesame, 2014). 17% of South Africa's population has internet access compared to 29% of Nigeria, 26% in Egypt, 49% in Morocco and 25% in Kenya (Goldstuck, 2012). The slower growth of internet usage could be due to the high pricing for internet access. As much as internet use is increasing, the above-mentioned statistics indicate that due to other constraints, it may not be widely used. The lack of internet usage can further emphasise the findings of the research. Students who are from a low socioeconomic status (SES) may not be able to fully utilise SNS, which may have no significant impact on their mental health. Furthermore, considering the low SES status of the area in which the study was conducted, Mahikeng, one has to take note of the access to the internet and SNS.

Internet usage in tertiary educational institutions was widespread due to the COVID-19 pandemic. Students accessed their educational needs through SNS platforms. Furthermore, most university students relocate from home to pursue their academic aspirations and thus find support from their online academic colleagues (Misra et al., 2015). SNS in an academic setting scored relatively high on the SONTUS, which suggested that the students often used SNS to meet their academic demands. Using a sample for a Shanghai University, Jiang (2021) found

that the poor academic performance as a result of COVID-19 resulted in significantly higher anxiety levels. This suggests that using SNS for positive academic purposes would result in lower levels of anxiety. Sobaih et al. (2020) further emphasised that in developing counties, the use of SNS for academic purposes resulted in the formation of a supportive online community. It may be because of this support that they preferred the use of SNS. The support received from the online community could suggests positive academic outcomes and positive SNS usage. In essence, when students use SNS for positive academic purposes, they are less likely to develop mental health challenges.

The differences in SNS usage across different genders have also been documented by previous empirical studies. This study found that there is no significant difference in the pattern of SNS usage between university first-year males and females. There is a belief that males adopt of newer technologies and use them more than females (Volkovich et al., 2014). As such, there is an assumption that males thus use SNS more frequently than females. However, this assumption was challenged by Misra et al. (2015), who found that with time, females became more accustomed to the adoption of newer technologies and use SNS more than males. Additionally, females are more communal and the social aspect of SNS accommodates their communal nature (Misra et al., 2015). This was supported by Wiese et al. (2014), who reported that female students spent more time on SNS, mostly with the aim of creating or maintain social relationships. The main function of SNS is to create social interactions so it thus makes sense that the inherent social drive that women have would result in them using SNS more frequently than men. The findings of this study found otherwise. They indicated that there is no significant pattern in the use of SNS by both males and females. These findings could be explained by looking at the current patterns of SNS associated with COVID-19. COVID-19 led to many individuals using SNS for a variety of reasons but mostly to close the gap created by the limited

face-to-face social interactions. Due to the migration towards accessing SNS, the gap of SNS usage between males and females has been lessened.

According to Pantic (2014), a 1998 study indicated that the increased usage of SNS usage led to the decrease in family interaction, which was a precursor for poor mental health. During the world pandemic, SNS served the purpose of connecting families and friends. SNS usage facilitated more interactions with loved ones. The use of SNS to facilitate positive family interactions has shown to improve mental health (Chen & Harris, 2019). The descriptive analysis of the SONTUS indicated that the participants mostly used SNS when they were relaxed and free. This indicates that they were not occupied by other activities and were more likely to interact with their friends and family which may have been beneficial for their mental health.

As indicated, first-year students used SNS mostly for relaxation and free periods. This suggests that the participants were not experiencing any mental health-related challenges when they used SNS. The needs and gratification theory emphasises that the use of SNS to fulfil certain needs can bring forth much needed relief (gratification). Relaxation has always been used as a technique to contain any mental distress. The use of SNS for relaxation may have assisted the participants to prevent any mental distress.

6.2 IMPLICATIONS OF THE STUDY

The ever expanding usage and access to SNS has created the need to explore its influence on human behaviour. There have been opposing arguments stating that SNS usage has a positive impact on human behaviour, and vice versa. The opposing arguments have left gaps in multiple areas of research.

The study sought to contribute to the conflicting findings of previous empirical studies regarding how SNS influence human behaviour. A university population with the sample being

first-year students was used due to the pressures of a new environment and how SNS usage can either negatively or positively contribute to the experience.

It is worth noting that the many of the studies conducted to explore the relationship between SNS usage and mental are conducted in developed countries. The economic and cultural factors of developed countries may make their population either more or less vulnerable to mental health challenges. More studies are required to explore the patterns between the research IV and DV within developing countries.

The study found that first-year students mostly used SNS during relaxed and free periods. This suggested that they were less prone to mental health challenges. Most of the studies that have been conducted have not explored the settings in which SNS are used. The setting in which they are used can also predict how there might be a relationship between SNS and mental health. Future studies need to explore the context of SNS usage as there is a gap in that area of research. These findings can predict problematic SNS usage or how SNS usage in certain settings can positively contribute to better mental health outcomes.

The need for further studies on SNS usage and mental health has to be upheld, more so because existing studies have provided opposing results. The opposing results may largely be as a result of the context in which the studies were conducted. Studies that are longitudinal and have a larger sample may prove beneficial in this area of research. It has to be noted that this study indicated that the use of SNS during relaxed and free periods may be beneficial for alleviating mental health challenges.

6.3 LIMITATIONS OF THE STUDY

The study faced a variety of limitations. Firstly, the research questionnaires were conducted online. This meant that the participants had to have internet access to participate in the study. Internet access also meant that they had to have a smartphone or a computer/laptop.

Secondly, the questionnaires were time-consuming and long. This created the possibility of falsifying the responses with the efforts of completing the questionnaires as fast as possible.

In addition to the abovementioned, the SES of the population used for the study has to be considered. The affordability of mobile data to participate in SNS activities and also to have access to the devices needed for SNS may indicate that the study population does not frequently engage with SNS. Furthermore, this may affected how they may find SNS desirable because of their lack of engagement with the technology.

Fewer males participated in the study which may have influenced the outcome of the study. Females have been found to use SNS for the creation of social cohesion and the facilitation of social relationships (Misra et al., 2015). This may have thus tilted the findings of the study.

Another limitation that was faced was the scope of the study. The scope of the study was limited as it was a mini-dissertation. This limited the variables that could have been explored. Furthermore, the chosen sample only represented a small minority of the university population. Therefore the study results could not be generalised to provide a full and concise indication of the relationship between social network usage and mental health in a university setting.

6.4 CONCLUSION

The relationship between SNS usage and mental health has long been debated, especially since the increased usage of SNS became apparent. Different people react differently to social constructs and, as such, certain demographics in relation to SNS use also have to be considered. The above study explored these variables using first-year university students as the sample. The findings indicated that there was no significant relationship between the variables. Most of the participants used SNS in relaxed settings and during their free periods. The use of

SNS in these settings could indicate that the students used SNS for the purpose of maintaining good mental health. As such, the context of the past year (2020-2021) had to be taken into consideration to substantiate these findings.

The current global pandemic (COVID-19) had changed the landscape and usage of SNS which possibly influenced the findings of the study. Not only were SNS influenced by COVID-19, people's mental health was also affected. This factor, among others, will continue to change or influence the manner in which we engage with SNS and mental health.

6.5 RECOMMENDATIONS

The following recommendations are made in light of the research findings. They are made either to maintain the favourable findings made or to find more clarity in the area of SNS usage and mental health.

1. Tertiary institutions of learning can implement SNS as a means to maintain online educational communities. This is with the aim of using SNS in a non-problematic manner and facilitate good mental health, especially in an academic setting.

2. The moderate use of SNS for relaxation and free periods may assist the students to alleviate mental health challenges. Campaigns and seminars aimed at encouraging positive use of SNS can further assist students to cope with their mental health challenges.

3. Adding to the abovementioned, the monitoring of SNS usage by students may result in lower mental health implications. The international trend, especially amongst developed countries, has indicated that problematic use of SNS by tertiary students resulted in higher levels of depression and anxiety. The monitoring of SNS usage given

our current SES standing is a preventative measure as internet accessibility is increasingly made available.

4. Lastly, justice to the research results can be done through a longitudinal study of the relationship between social network usage and mental health. Better demographical factors and a longer time frame can provide more conclusive results about the relationship.

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APPENDICES

Appendix A – Consent forms

Consent form – Research Participants

The proposed research focuses on the relationship between social network usage, demographic factors and mental health of first-year students at the North-West University, Mafikeng Campus. The research is part of the requirements for the completion of the Master of Social Sciences in Clinical Psychology and it will be conducted by Mr Thabo van Wyk.

The research aims to explore the possible relationship between social network usage, demographic factors and mental health, and as such, self-report scales will be used to collect data, which will undergo various research analysis. Anonymity will be ensured throughout the collection and analysis of the data. As the participant, the following may be considered:

- The freedom to withdraw from participating in the research at any time.
- The use of the participant's information and results in the research and the publication thereof.
- The freedom to remain anonymous.
- The right to obtain, if desired, the summary of the results once the research has been completed.

Signature of participant Signature of the researcher

Date Date

Information about the researcher is provided below:

Name: Thabo van Wyk

Email: thabovanwykjnr@gmail.com

Contact Number: 078 888 0698

Consent Form – Research Assistant

The mentioned research study focuses on the relationship between social network usage, demographic factors and mental health of first-year students at the North-West University, Mafikeng Campus. The research is conducted as part of the requirements for the completion of the Master of Social Sciences in Clinical Psychology and it will be conducted by Mr Thabo van Wyk.

The research aims to explore the possible relationship between social network usage, demographic factors and mental health and as such, self-report scales will be used to collect data, which will undergo various research analysis. Anonymity will be ensured throughout the collection and analysis of the data. As the research assistant, the following are to be maintained:

- Confidentiality of the research participant's identities
- Confidentiality of the research results
- Professional conduct towards the research team and participants

If you agree to the abovementioned, kindly sign below

Signature of Research Assistant Signature of Researcher

Information about the researcher is provided below:

Name: Thabo van Wyk

Email: thabovanwykjnr@gmail.com

Contact Number: 078 888 0698

Consent Form – Statistician

The mentioned research study focuses on the relationship between social network usage, demographic factors and mental health of first-year students at the North-West University, Mafikeng Campus. The research is conducted as part of the requirements for the completion of the Master of Social Sciences in Clinical Psychology and it will be conducted by Mr Thabo van Wyk.

The research aims to explore the possible relationship between social network usage, demographic factors and mental health and as such, self-report scales will be used to collect data, which will undergo various research analysis. Anonymity will be ensured throughout the collection and analysis of the data. As the research statistician, the following are to be maintained:

- Confidentiality of the research participant's identities
- Confidentiality of the research results and findings

If you agree to the abovementioned, kindly sign below

Signature of Research Statistician Signature of Researcher

Information about the researcher is provided below:

Name: Thabo van Wyk

Email: thabovanwykjnr@gmail.com

Contact Number: 078 888 0698

Appendix B – Social Network Usage Scale (SONTUS)

Kindly use the scale below to indicate how often you used the social networking sites like Facebook, Instagram, WhatsApp, Twitter, Myspace, Pinterest etc., during the past week in the following situations and places:

1 = Not applicable to me during the past week.

2 = I never used it during the past week.

3 = I used it once during the past week but spent less than 10 min.

4 = I used it once during the past week but spent between 10 and 30 min.

5 = I used it once during the past week but spent more than 30 min.

6 = I used it between 2 and 3 times during the past week but spent less than 10 min each time.

7 = I used it between 2 and 3 times during the past week but spent between 10 and 30 min each time.

8 = I used it between 2 and 3 times during the past week but spent more than 30 min each time.

9 = I used it more than 3 times during the past week but spent less than 10 min each time.

10 = I used it more than 3 times during the past week but spent between 10 and 30 min each time.

11 = I used it more than 3 times during the past week but spent more than 30 min each time.

Item	1	2	3	4	5	6	7	8	9	10	11
1 When you are at a seminar/workshop or training program											
2 When you are at home sitting idly											
3 When you need to reduce your mental stress											
4 When you go to the stadium to watch football, basketball etc.											
5 When you are doing school or job-related assignment at home											
6 When you are waiting for someone (e.g. friends) either in their house or at a pre-arranged place											
7 When you are listening to music, radio, religious lectures etc.											
8 When you have gone through a lot of stress											
9 When you are in a meeting											
10 When you are in the class receiving lecture											
11 When you need to maintain contact with existing friends											
12 When you are in bed about to sleep											
13 When you are reading in the library for academic purpose e.g., recommended text for class											
14 When you are at a place to repair your car, house appliances, etc.											
15 When you need to reduce your emotional stress											
16 When you want to reduce the pressure of your daily routines											

17When you are at a social gathering like wedding ceremony, birthday party, reception etc.

18When you need to communicate with your families and friends

19When you are sitting in a religious place (e.g., church, mosque) and activities like sermon or prayer is yet to start

20When you need to find out more about people you met offline

21When you are in the company of friends/family/colleagues having fun

22When you are watching TV, news, football, films, sports, etc.

23When you go to the cinema house to watch movie(s)

24When you are a passenger in a car/bus/train for at least 2 min

25When you need to find people you haven't seen for a while

26When you are waiting for your boss in her office for at least 2 min when she is not attending to you

27When you are trying to forget your financial challenges

28When you are online doing school or job-related works e.g., project, homework

29Watching academic-related video lectures or those related to your job

Appendix C – Beck Anxiety Inventory

Below is a list of common symptoms of anxiety. Please carefully read each item in the list. Indicate how much you have been bothered by that symptom during the past month, including today, by circling the number in the corresponding space in the column next to each symptom.

	Not At All	Mildly but it didn't bother me much.	Moderately - it wasn't pleasant at times.	Severely – it bothered me a lot.
Numbness or tingling	0	1	2	3
Feeling hot	0	1	2	3
Wobbliness in legs	0	1	2	3
Unable to relax	0	1	2	3
Fear of worst happening	0	1	2	3
Dizzy or lightheaded	0	1	2	3
Heart pounding/racing	0	1	2	3
Unsteady	0	1	2	3
Terrified or afraid	0	1	2	3
Nervous	0	1	2	3
Feeling of choking	0	1	2	3
Hands trembling	0	1	2	3
Shaky / unsteady	0	1	2	3

Fear of losing control	0	1	2	3
Difficulty in breathing	0	1	2	3
Fear of dying	0	1	2	3
Scared	0	1	2	3
Indigestion	0	1	2	3
Faint / lightheaded	0	1	2	3
Face flushed	0	1	2	3
Hot/cold sweats	0	1	2	3
Column Sum				

Scoring **-** Sum each column. Then sum the column totals to achieve a grand score. Write that score here _____.

Appendix D – Beck's Depression Inventory

This depression inventory can be self-scored. The scoring scale is at the end of the questionnaire.

1.

0 I do not feel sad.

1 I feel sad

2 I am sad all the time and I can't snap out of it.

3 I am so sad and unhappy that I can't stand it.

2.

0 I am not particularly discouraged about the future.

1 I feel discouraged about the future.

2 I feel I have nothing to look forward to.

3 I feel the future is hopeless and that things cannot improve.

3.

0 I do not feel like a failure.

1 I feel I have failed more than the average person.

2 As I look back on my life, all I can see is a lot of failures.

3 I feel I am a complete failure as a person.

4.

0 I get as much satisfaction out of things as I used to.

1 I don't enjoy things the way I used to.

2 I don't get real satisfaction out of anything anymore.

3 I am dissatisfied or bored with everything.

5.

0 I don't feel particularly guilty

1 I feel guilty a good part of the time.

2 I feel quite guilty most of the time.

3 I feel guilty all of the time.

6.

0 I don't feel I am being punished.

1 I feel I may be punished.

2 I expect to be punished.

3 I feel I am being punished.

7.

0 I don't feel disappointed in myself.

1 I am disappointed in myself.

2 I am disgusted with myself.

3 I hate myself.

8.

0 I don't feel I am any worse than anybody else.

1 I am critical of myself for my weaknesses or mistakes.

2 I blame myself all the time for my faults.

3 I blame myself for everything bad that happens.

9.

0 I don't have any thoughts of killing myself.

1 I have thoughts of killing myself, but I would not carry them out.

2 I would like to kill myself.

3 I would kill myself if I had the chance.

10.

0 I don't cry any more than usual.

1 I cry more now than I used to.

2 I cry all the time now.

3 I used to be able to cry, but now I can't cry even though I want to.

11.

0 I am no more irritated by things than I ever was.

1 I am slightly more irritated now than usual.

2 I am quite annoyed or irritated a good deal of the time.

3 I feel irritated all the time.

12.

0 I have not lost interest in other people.

1 I am less interested in other people than I used to be.

2 I have lost most of my interest in other people.

3 I have lost all of my interest in other people.

13.

0 I make decisions about as well as I ever could.

1 I put off making decisions more than I used to.

2 I have greater difficulty in making decisions more than I used to.

3 I can't make decisions at all anymore.

14.

0 I don't feel that I look any worse than I used to.

1 I am worried that I am looking old or unattractive.

2 I feel there are permanent changes in my appearance that make me look unattractive

3 I believe that I look ugly.

15.

0 I can work about as well as before.

1 It takes an extra effort to get started at doing something.

2 I have to push myself very hard to do anything.

3 I can't do any work at all.

16.

0 I can sleep as well as usual.

1 I don't sleep as well as I used to.

2 I wake up 1-2 hours earlier than usual and find it hard to get back to sleep.

3 I wake up several hours earlier than I used to and cannot get back to sleep.

17.

0 I don't get more tired than usual.

1 I get tired more easily than I used to.

2 I get tired from doing almost anything.

3 I am too tired to do anything.

18.

0 My appetite is no worse than usual.

1 My appetite is not as good as it used to be.

2 My appetite is much worse now.

3 I have no appetite at all anymore.

19.

0 I haven't lost much weight, if any, lately.

1 I have lost more than five pounds.

2 I have lost more than ten pounds.

3 I have lost more than fifteen pounds.

20.

0 I am no more worried about my health than usual.

1 I am worried about physical problems like aches, pains, upset stomach, or constipation.

2 I am very worried about physical problems and it's hard to think of much else.

3 I am so worried about my physical problems that I cannot think of anything else.

21.

0 I have not noticed any recent change in my interest in sex.

1 I am less interested in sex than I used to be.

2 I have almost no interest in sex.

3 I have lost interest in sex completely.

Appendix E – Biographical Information

Age: _____

Gender: Male ☐ Female ☐

Faculty:_____

Course being studied:_____

Appendix F - Researcher Ethics Certificate

Private Bag X6001, Potchefstroom
South Africa 2520
Tel: +2718 299-1111/2222
Web: http://www.nwu.ac.za

Faculty of Health Sciences Ethics
Office for Research, Training
and Support

Tel: 018 299 2062
Email:minnie.greeff@nwu.ac.za

15 April 2019

Mr Thabo van Wyk
HPCSA Nr: PSS 0149713

Dear Mr van Wyk

PROOF OF ATTENDANCE AND ASSESSMENT

This letter certifies that you have attended the 2-day ethics training entitled:

The Basics of Health Research Ethics
(Accreditation number: PSB002/110/01/2019 from University of Free-State CPD accreditation department accredited by the HPCSA)

Presenter: Prof M Greeff (Head of the Health Sciences Ethics Office for Research, Training and Support) on the 05th – 06th March 2019.

This letter of attendance, serves as proof of ethics training and assessment and is valid for three (3) years and expires on 31 March 2022. (Where applicable, Ethics CEUs awarded: 14 CEUs)

Yours sincerely

Prof Minnie Greeff
Head of Health Sciences Ethics
Office for Research, Training and Support

Prof Jeanetta du Plessis
Deputy Dean: Research and Innovation
Faculty of Health Sciences

Appendix G - HREC Ethics Approval Letter

Private Bag X1290, Potchefstroom
South Africa 2520

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

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

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

22 January 2021

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the North-West University Health Research Ethics Committee (NWU-HREC) on 22/01/2021, the NWU-HREC hereby approves your study as indicated below. This implies that the NWU-HREC grants its permission that, provided the general and specific conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: Relationship between social network usage, demographic factors and mental health of first year students in the North West University, Mahikeng Campus
Principal Investigator/Study Supervisor/Researcher: Prof CA Oduaran
Student: TNG van Wyk - 26578352

Ethics number: N W U - 0 0 3 5 2 - 2 0 - A 1
(Institution – Study Number – Year – Status)

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

Application Type: Single study
Commencement date: 22/01/2021
Expiry date: 28/02/2022

Risk: Medium

Approval of the study is provided for a year, after which continuation of the study is dependent on receipt and review of an six-monthly monitoring report and the concomitant issuing of a letter of continuation. Monitoring reports are due at the end of July and February annually until completion.

General conditions:

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

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

Appendix H - COMPRES Approval Letter

Recommendation of the Research Proposal Committee to the Research Ethics Committee
Research Using Human Participants

Scientific Committee	**Name**	Thabo van Wyk	**Discipline**	MA/MSC Clinical Psycholody
	Research Entity	COMPRES	**Contact Person**	Ellen Seokold
	Faculty	Health Science	**E-mail**	23352000@nwu.ac.za
Title of the study:	Relationship between Social Network Usage, Demographic Factors and Mental Health of First Year Students			
Researchers involved in the study:	Prof Choja Oduaran			
Executive summary of the research:	There has been an increase in the use of social network and as such, there has been associations with its use and mental health Topolovec-Vranic and Natarajan (2016). People have different experiences when they are in university and this may predispose or perpetuate existing mental related challenges. Thus the addition of social network usage to the university experience is a problem worth exploring. Boateng and Amankwaa (2016) found that social network usage made it easier for students to better communicate about various areas about their academic lives, however, Berryman, Ferguson, and Negy (2018) found that found that amongst young adults, social network usage was rather a cry for help for those who already had pre-existing mental. This was further emphasised by Barman, Mukhopadhyay, and Bandyopadhyay (2019) who found that medical students in West Bengal presented with depressive and anxiety symptoms that were associated with social media usage. Because of these contradictory statements, the study of the relationship between social network usage and mental health has to be further explored. According to Strickland (2014), social network usage is more prevalent amongst individuals between the ages 18 and 29 and many of the known psychiatric condition develop between the ages of 18 and 24. The research aims to examine the relationship between social network usage of first year university students and their mental health and demographics. The population will consist of first year students at the North West University; Mahikeng Campus. The research objectives are to examine the relationship between social network usage and depression, examine the relationship between social network usage and anxiety, and to examine the relationship between social network usage and gender, and lastly, to examine the relationship between social network usage and age. Some objectives will be explored using a quantitative research approach with a correlational design where the data will be follow a linear regression analysis where the gender of the participants will be analysed using an independent t-test analysis.			
Potential risk level for human participants:	No risk	☐	**Motivate:** The study uses students as its population and explores concepts such as anxiety that could have clinical effects on participants	
	Minimal risk	☐		
	Medium risk	☒		
	High risk	☐		
	No risk	☐		

1

Appendix I - Similarity Index

24374830:Updated_Relationship_between_social_network_usage_-_01.07.2021.pdf

by CHANTE KLOPPER

Submission date: 02-Jul-2021 10:00AM (UTC+0200)
Submission ID: 1614870618
File name: dated_Relationship_between_social_network_usage_-_01.07.2021.pdf (505.9K)
Word count: 13229
Character count: 69739

24374830:Updated_Relationship_between_social_network_u..._01.07.2021.pdf

ORIGINALITY REPORT

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SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

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1%

★ "Proceedings of the Regional Conference on Science, Technology and Social Sciences (RCSTSS 2016)", Springer Science and Business Media LLC, 2019

Publication

Exclude quotes	On	Exclude matches	< 4 words
Exclude bibliography	On		

Appendix J - Language Editing Certificate

House 367

Hex River Lifestyle Estate

Waterkloof East Ext 12

Rustenburg 0299

25/07/2021

This is to certify that the mini-dissertation entitled

RELATIONSHIP BETWEEN SOCIAL NETWORK USAGE AND MENTAL HEALTH OF FIRST-YEAR STUDENTS

Submitted by **THABO NOAH GEORGE VAN WYK**

ORCID:0000-0002-6598-4237

For the degree of **MASTER OF CLINICAL PSYCHOLOGY**

at the **NORTH-WEST UNIVERSITY (MAFIKENG CAMPUS)**

Has been edited for language by

Mary Helen Thomas (B.Sc. Hons. PGCE)

Email: thomashelen212@gmail.com

Cell: 072 242 9066

Appendix K - Deputy Dean Approval Letter

NWU ®
NORTH-WEST UNIVERSITY
NOORDWES-UNIVERSITEIT
YUNIBESITI YA BOKONE BOPHIRIMA

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: +2718 299-1111/2222
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OFFICE OF THE DEPUTY DEAN: RESEARCH AND INNOVATION, FACULTY OF HEALTH SCIENCES

Email: jeanetta.duplessis@nwu.ac.za
Tel: +27 (0)18 299 2274

29 October 2020

To whom it may concern

LETTER OF PERMISSION

I, the Deputy Dean Research & Innovation of the Faculty of Health Sciences hereby gives permission that data may be collected on the Mahikeng campus for the study to find the possible relationship between social network usage, mental health and the demographics of the first year students.

With regards

PROF J DU PLESSIS
DEPUTY DEAN: RESEARCH AND INNOVATION

Bantjes, J., Saal, W., Gericke, F., Lochner, C., Roos, J., Auerbach, R. P., Mortier, P., Bruffaerts, R., Kessler, R. C., & Stein, D. (2020). Mental health and academic failure among first-year university students in South Africa. *South African Journal of Psychology*, 0081246320963204.

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