Psychosocial well-being of North-West University students living with symptoms of attention-deficit hyperactivity disorder

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

Supervisor: Mr C Mapaling

Graduation: May 2023

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Co-supervisor: Dr FK Matlakala

Assistant Supervisor: Prof HB Grobler

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DECLARATION

I, Mpho Mpetha, hereby declare that this study titled “Psychosocial well-being of North-West University students living with symptoms of attention deficit hyperactivity disorder” is my own study and has not been submitted to any tertiary institution previously. I would like to further declare that this is my own original work and that all the cited sources have been acknowledged and referenced in the study.

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Mpho Junior Mpetha

Date: October 2022

DEDICATION

This work is the fruit of countless challenges and amazing experiences. I would like to dedicate this study to myself, as an indication of my hard work and commitment to growing and developing myself and my community.

ACKNOWLEDGEMENT

I would like to give my utmost and sincere gratitude to:

- Jehovah, our Father, for keeping me under your wings, giving me wisdom and the strength to keep going;
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LIST OF ACRONYMS AND ABBREVIATIONS

Abbreviation/Acronym	Meaning
ADHD	Attention Deficit Hyperactivity Disorder
NWU	North-West University
APA	American Psychiatric Association
DSM-5	Diagnostic and Statistical Manual of Mental Disorders, 5th Edition
COMPRES	Community Psychosocial Research
HPCSA	Health Professions Council of South Africa
HREC	Health Research Ethics Committee
RDGC	Research Data Gatekeeper Committee
SACSSP	South African Council for Social Services Professions

ABSTRACT

Attention Deficit Hyperactivity Disorder (ADHD) is a psychological disorder of the neurodevelopmental type and has long been recognised as a clinical phenomenon. According to the American Psychiatric Association (APA), ADHD is characterised by difficulty in paying attention, hyperactivity and acting in a way which is not appropriate for an individual's age, without regard for consequences (impulsiveness). However, several questions are not answered about ADHD, particularly among university students. One major gap about ADHD is concerning the personal lived experiences of students living with ADHD within the South African context. Thus, this study aims to address this gap by qualitatively exploring and describing the experiences of students living with symptoms of ADHD regarding their psychosocial well-being. This study was aimed at qualitatively exploring the psychosocial well-being of North-West University (NWU) students living with symptoms of ADHD.

The North-West University is a South African university with three campuses in Potchefstroom and Mahikeng, which are located in the North West province, and the Vanderbijlpark campus, which is located in the Gauteng province. With the university's aligned status, the NWU is one of the biggest universities in South Africa. The NWU is a multiracial university with a diverse student population. A total of 12 participants were sampled using purposive sampling techniques and recruited through advertisements which were distributed by the primary researcher on the NWU student Facebook pages.

The findings showed that most students did not know about ADHD and had developed different coping mechanisms to address and manage their symptoms, irrespective of whether these

mechanisms were dysfunctional or constructive. The students showed appreciation of their strengths and the capacity to influence their environment and at the same time, they were aware of, and acknowledged, their lack of power in directly influencing their environment and relationships. Given the students' past experiences and presenting symptoms, most students are likely to be diagnosed with ADHD; thus, it is important to continue studying and understanding this population with even larger samples including ADHD clinically diagnosed students to help enrich and increase the conclusions drawn about these students' experiences.

Keywords: ADHD, adult, NWU, psychosocial well-being, students, symptoms

• CHAPTER ONE

• ORIENTATION TO THE STUDY

1.1 Introduction and background

Attention Deficit Hyperactivity Disorder (ADHD) is one of the most researched psychological disorders in recent years. However, there are various areas which are underexplored, particularly regarding the experiential parts of living with the condition. ADHD is a neurodevelopmental disorder and has long been recognised as a clinical phenomenon that is characterised by difficulty paying attention, hyperactivity, and impulsiveness, which is not appropriate for an individual's age (American Psychiatric Association [APA], 2013). One major gap in our knowledge regarding research about ADHD is the need for direct contributions from people living with ADHD (Gaynes et al., 2014). This significant gap in knowledge about ADHD is addressed by this study by exploring and describing the personal experiences of students living with symptoms of ADHD at North-West University (NWU). The NWU is a South African university with three campuses at Potchefstroom and Mahikeng, which are located in the North West province, and the Vanderbijlpark campus, which is located in the Gauteng province.

With the university's aligned status, NWU is one of the biggest universities in South Africa. The NWU is a multiracial university with a diverse student population (North-West University, 2017). The total number of on- and off-campus students enrolled at the NWU by 2020 was 58 356. At the beginning of 2021, the number of undergraduate students was 49 007, postgraduate students 9 058 and occasional students 291 (North-West University, 2021). The total number of on- and off-campus students enrolled at the NWU by 2017 was 72 994. The

Potchefstroom campus had 52 360, the Mahikeng campus had 12 709, and the Vanderbijlpark campus had 7 925 students with males accounting for 33.9% and females accounting for 66 % of the student population (North-West University, 2017).

The Department of Higher Education and Training (2016) announced that there were 7 525 students living with disabilities (physical and mental) at South African universities. Since 2014, the quantity of students living with disabilities has been increasing at the NWU. In 2014, the number of students was 117, and in 2017 the number of students was 467; 44.3% were enrolled at the Potchefstroom campus, 30.2% were enrolled at the Mahikeng campus and 25.5% were enrolled at the Vanderbijlpark campus (North-West University, 2017).

ADHD is recognised as a disability at the NWU and it could lead to psychological learning difficulties. According to the NWU student counselling and development unit, the use of "disability" in this instance does not necessarily imply disability following the law, but the condition has to be documented and verified by a professional. ADHD impacts a student's cognitive, emotional, and behavioural functioning, which in turn has implications for a student's ability to learn and memorise or retain information, and to some extent, it influences his/ her personal and social relationships (Brod et al., 2012a).

This study addressed the gap in knowledge of the personal experience of students living with symptoms of ADHD concerning their psychosocial well-being through a qualitative approach. The established objectives of the study helped guide the interview process, which was the data collection process, so that the primary researcher could reach the aim of the study and answer the research question, following a deductive process. This occurred through semi-

structured interviews followed by thematic analysis. A purposive sampling technique was utilised to sample NWU students living with symptoms of ADHD.

The term psychosocial well-being in this regard referred to the quality of life of psychological factors, social factors, and the relationship between these factors concerning the emotional, social, and physical components of an individual's holistic life (Eiroa-Orosa, 2020). Students with symptoms of ADHD experience academic deficits (Martin, 2014a). They are at greater risk of developing psychological difficulties and also stand the risk of misusing stimulants (Green & Rabiner, 2012).

1.2 Problem statement

According to Goulardins et al. (2015), ADHD has been one of the most widely investigated conditions for a while. However, there are various areas which are underexplored, particularly corresponding to the experiential parts of living with the condition. One major gap in our insight into ADHD is a significant need for the direct contribution of people living with ADHD (Gaynes et al., 2014). Numerous questions also stay unanswered about ADHD in the student population. DuPaul et al. (2017) state in their study that college students with ADHD experienced academic deficits and there is a greater risk for college students with ADHD when it comes to academic and psychological difficulties.

Although studies have been conducted with student populations in other countries and South Africa, limited literature on ADHD and its impact on South African students exists. Little to no studies could be found with a specific focus on the psychosocial well-being of students living with ADHD in South Africa. In addition, it is important to note that South Africa is a diverse nation made up of different languages, cultures, religions, races, ethnicities, which may

have an influence on individuals' personal experience and ultimately their psychosocial well-being compared to other countries. Thus, it is important to understand ADHD, how to recognise it, and how it should be treated within this unique context.

1.3 Contribution of the study

It is imperative to perceive that most research on ADHD has occurred in the clinical setting and has generally utilised quantitative techniques for enquiry (Lefler et al., 2016), which is useful for empirical diagnosis. According to Chacko et al. (2010), given the chronic and pervasive nature of ADHD, which can cause personal distress for individuals living with ADHD, it is pivotal that we do not disregard the personal experiences of individuals with ADHD in our exploration, as more noteworthy comprehensive information from personal experiences can bring about direct improvement in the lives of the individuals who are living with ADHD as a personal experience (Stanghellini & Aragona, 2016).

This study will benefit the broader community by creating awareness, which will in turn indirectly benefit students living with symptoms of ADHD because the knowledge gained through this research will create awareness of the psychosocial well-being of the NWU students living with symptoms of ADHD. This will also help inform the university about the experiences of its students living with symptoms of ADHD, thus helping the university to develop, employ and provide teaching approaches, learning techniques and an environment that will enhance these students' academic and social experiences.

1.4 Research question

The research question is as follows: How do North-West University students experience psychosocial well-being while living with symptoms of attention deficit hyperactive disorder (ADHD)?

1.5 Aims and objectives of the study

1.5.1 Aim of the study

The study aimed to qualitatively explore the psychosocial well-being of North-West University students living with symptoms of attention deficit hyperactive disorder (ADHD).

1.5.2 Objectives of the study

The objectives were to:

- Explore and describe the challenges of students living with symptoms of ADHD regarding their psychosocial well-being.
- Explore and describe the positive experiences of students living with symptoms of ADHD regarding their psychosocial well-being.
- Make recommendations to improve the experiences of psychosocial well-being of students living with symptoms of ADHD.

1.6 Limitations of the study

The most limiting factor of the study is that it was a small-scale study on adult ADHD which limits the primary researcher from gaining substantial confidence in the conclusions

reached about this group. Furthermore, literature on the prevalence of college students with ADHD could not be found and the researcher relied primarily on the self-reporting of the participants to decide whether they were eligible to participate in the study. The primary researcher also stuck to the inclusion/exclusion criteria as was determined and approved for the study. More importantly, since the study focused on symptoms and there were no clinical assessments on the students in the sample for a diagnosis of ADHD by a qualified professional, this leads to a narrow confidence level in the results and conclusions of the study. A clinical diagnosis would not only be beneficial for research, but it would have also improved the level of confidence in the outcomes and drawn conclusions for future research.

The prominent ethical issue within this study includes confidentiality and the researcher's role as the instrument of data collection. This is because the study is qualitative. The data collection technique employed by the primary researcher meant that the researcher had to communicate directly with the participants. Although the researcher maintained the standards of objectivity and non-bias during the entire research process and used a descriptive qualitative research methodology which meant he could not make inferences about the data he received from the participants, the fact that he was the instrument of data collection could also have influenced his interpretation and presentation. Thus, this research had an independent co-coder in the interpretation of data, to help with coding the data received from the participants for corroboration.

1.7 Additional ethical considerations

1.7.1 Expertise of researchers

The researcher completed a Bachelor's degree in Social Sciences in Psychology in 2018 and completed his Honours degree in Health Sciences in Psychology in 2019 at the NWU Mahikeng campus. He is currently busy with his master's degree in clinical psychology. The primary researcher received formal training in qualitative research and thematic analysis. The primary researcher also completed formal ethics training (TRREE training modules 1, 2.1, 3.1 and the South African national supplement). During the entire research process, the primary researcher was working under the supervision of Mr Curwyn Mapaling, who is registered with the Health Professions Council of South Africa (HPCSA) and Dr Frans Matlakala who is registered with the South African Council for Social Services Professions (SACSSP). They are a clinical psychologist and social worker, respectively and are thus qualified to supervise the study. The primary researcher also received research assistance from Professor Herman Grobler, who is a research psychologist and Associate Professor with more than 18 years of experience in higher education. He, Prof Grobler, has published in national and international peer-reviewed journals on qualitative, quantitative and mixed methods research.

1.7.2 Monitoring plan for the research

Before commencing with research, the primary researcher read through the NWU manual for post-graduate studies to have a comprehensive understanding of the process, protocols and ethical conduct expected from him during his study. The primary researcher was trained in the application of qualitative research and thematic analysis. Mr Curwyn Mapaling and Dr Frans

Matlakala monitored the entire research process using continuous supervision sessions, either through email, Zoom sessions or telephonic conversations. In order to maintain compliance with the approved proposal, the researchers constantly referred to it for guidance.

1.7.3 Risk level and benefits of the study

1.7.3.1 Risks

The study was a medium-risk study with possible psychological risks for participants. The participants could present with inattention and impulsivity considering that the participants present with symptoms of ADHD. With all this in mind, the participants were encouraged to take their time and answer truthfully. The counselling departments of the three campuses were available for any students who might be experiencing any psychological distress as a result of the research process. As a precaution, the contact details of the NWU counselling department were included in the informed consent. The NWU counselling department offers counselling services to registered NWU students and the participants of the study were students registered with the NWU. The services are rendered for free.

As a token of appreciation and to ensure that the financial costs were limited, if not zero when it came to students, students who were not around campus to use the free WI-FI, requested data vouchers from the primary researcher to take part in the online interviews.

1.7.3.2 Benefits

There are more benefits than risks. Students were given a chance to share their personal experiences, which were a shared experience to some extent, as they are students who are living with symptoms of ADHD. This is important because the experience allowed them to be

understood which is important for them to be respected and treated with dignity whilst being educated, for the students to live a meaningful life. These are important concepts to such an extent that they are also represented in the South African Constitution. Furthermore, an improved understanding of ADHD benefits the broader community, which in turn indirectly benefits students living with ADHD, because the knowledge gained through this research creates awareness of the psychosocial well-being of North-West University students living with symptoms of ADHD and could guide future research in this regard. This study helps inform the university about the experiences of its students living with symptoms of ADHD, which could also help the university to develop and employ teaching and learning techniques and provide an environment that takes into consideration its students living with symptoms of ADHD, thus enhancing the learning experience of these students.

1.8 Conclusion

Being a student comes with its challenges and problems which include adjusting to the transition from being a high school student to being a university student. Some of the major changes and challenges that come with the transition include increased freedom and autonomy from family or guardians and increased academic pressure, which all demand a lot of responsibility from the students. Comprehensively understanding the psychosocial well-being of students living with symptoms of ADHD is of paramount importance since being a student is demanding and the presence of ADHD symptoms can make it more difficult for this identified student population.

• CHAPTER TWO

• LITERATURE AND THEORETICAL PERSPECTIVE

2.1 Introduction

Research on the higher education student population living with ADHD has been conducted nationally and internationally. However, there are still some gaps in our knowledge regarding ADHD in the student population, especially with regards to their lived experiences (Amod et al., 2013). After a literature search was done by the researcher, seemingly no studies with a specific focus on the psychosocial well-being of students living with symptoms of ADHD in South Africa could be found. Compared to some of the other countries, South Africa is a diverse nation made up of different languages, cultures, religions, races, ethnic groups, etcetera (Griffith & Zuberi, 2015), which can have an impact on an individual's personal experience and ultimately on their psychosocial well-being. It is important to note that these differences help in informing the same population with different value systems which in turn influences their experiences. Therefore, it is important to understand, recognise and treat ADHD in this unique context and also take into consideration that adults living with ADHD are challenged in every dimension of their lives.

This chapter focuses on the review of literature relating to the study. This literature review will increase familiarity with the topic, which is important for the conceptualisation of living with ADHD as a student. The review will enable the researcher to observe gaps in

knowledge about the topic, which will direct future studies and more importantly, provide insight into the psychosocial well-being of students living with ADHD.

2.2 Theoretical framework: Bronfenbrenner's ecological systems theory

Bronfenbrenner's ecological systems theory is essentially an ecological systems theory that helps one understand that the development of an individual occurs within a particular context. According to Tudge et al. (2016), the theory states that an individual's development is influenced by his/her environment. The theory is therefore useful in explaining and understanding individuals' relationships within communities and society at large; moreover, it has been used to associate psychological and academic or scholastic paradigms with early educational curriculums and practices (Hayes et al., 2017). The theory recongises six environmental systems that one interacts with; namely, the individual, microsystem, mesosystem, exosystem, macrosystem, and chronosystem.

The individual, who is technically not a system, includes aspects such as the person's emotions and psychological factors which influence his/her participation in their environment (Murphy, 2020). Although Bronfenbrenner's ecological systems theory postulates that individuals are influenced by their environment, it acknowledges that individuals are also active participants within their system. For instance, two people who are living with similar symptoms of ADHD might not respond or experience the same struggles. Thus, according to Anixt et al. (2016), some individuals living with ADHD can outgrow the symptoms of ADHD whilst others might experience the symptoms for their entire lives which might lead to them experiencing well-being differently.

The microsystem refers to systems and groups of people with whom one has an immediate and direct relationship (Zhang, 2018). For instance, these systems include family, school, friends, and church. The relationships in the microsystem are interdependent and interrelated which means that as much as the context influences the individuals, they too can affect the context which in turn can determine how the system reacts to them (Crawford et al., 2020). For example, if on average the amount of time allocated for a class is an hour, students living with symptoms of ADHD might find it difficult to sustain their attention for that period which would lead to underperformance in their work compared to their classmates.

The mesosystem refers to the relationship between microsystems (Tudge et al., 2017). In the mesosystem, the microsystems of the individuals do not operate in isolation but rather they are interconnected and have an impact on the individual. Some students living with ADHD can go undiagnosed with ADHD and untreated, particularly because it often exists with comorbid and debilitating conditions in adults (Ginsberg et al., 2014) which makes it difficult to diagnose by mental health professionals and this can lead to behavioural, and emotional, social and academic problems. This means that these students could go through their college or university years being treated as normal students. Therefore, they might struggle with their academic lives and might not receive the services or support given to students living with disabilities or in particular those diagnosed with ADHD.

The exosystem is a system that integrates traditional and nontraditional social structures, which are not in direct or immediate contact with the individual but possess an indirect or secondary influence on the individual's microsystems (Paat, 2013). Most of the laws regarding how to teach in colleges and universities are made in the national political sphere with an average and 'normal' student in mind, who does not suffer from ADHD symptoms. Although in

most cases these students are not a part of that decision-making, they have to go to class and form part of that 'normal' process even if it might place them at a disadvantage and risks them not succeeding in their studies.

The macrosystem focuses on and describes the elements of culture that affect the development of the individual such as the social, economic, ethnic and wealth statues (Rosa & Tudge, 2013). It also takes into account the microsystems and mesosystems submerged within these cultures. People who belong to a certain culture often share a common identity and value system (Altugan, 2015), and it is important to note that the macrosystem often evolves as time goes by. Although ADHD is a neurodevelopment disorder that affects everyone in the world regardless of race or ethnicity, in some communities within South Africa some people still believe in traditional healers and African customs who would probably understand medical illness or mental illness such as ADHD to be a result of being cursed or being bewitched.

The chronosystem is made of the environmental changes and transitions that occur over time and this includes developments in the social and historical domains (Zhang, 2018). It is only just recently that the Diagnostic and Statistical Manual of Mental Disorders, 5th Edition (DSM-5) recognised ADHD as a mental disorder that can affect individuals in childhood and even adulthood (Tannock, 2013). This means that numerous adults who had ADHD symptoms in previous years went by untreated because it was not understood or believed that ADHD could affect adults. Through time, changes occurred in the DSM to a point where we now have the DSM-5, which states and appreciates that ADHD can affect both children and adults.

This theory helps one understand that the development of an individual occurs within the social environment and that the individual is the product of such systems. Simultaneously the

theory appreciates that individuals are active participants who have an influence on the systems in terms of how they act or react to their environment.

2.3 Attention-deficit hyperactivity disorder

ADHD is a neurodevelopmental disorder with symptoms that include the inability to concentrate, impaired attention, hyperactivity and restlessness, poor organisation skills, and impulsiveness (APA, 2013). However, it should be noted that not every person who is diagnosed with ADHD, will present with all of the above symptoms. ADHD is primarily characterised by difficulty in paying attention, hyperactivity and acting without regard to consequences (impulsiveness), which is not appropriate for an individual's age.

To diagnose ADHD, the presentation of symptoms should show up before an individual is twelve years of age, be present for over six months, and have an impact on the individual in any two settings, for example, school and home. ADHD has three different types of presentations, and the diagnoses are based on which types of symptoms are dominant in the individual. These include the *Predominantly Inattentive Presentation, the Predominantly Hyperactive-Impulsive Presentation,* and the *Combined Presentation,* which incorporates both the *Predominantly Inattentive Presentation* and the *Predominantly Hyperactive-Impulsive Presentation* (APA, 2013).

The *Predominantly Inattentive Presentation* is a type, which finds it hard to organise or finish tasks, is unable to focus on details, and unable to follow instructions and conversations. The individual will, in most instances, become easily distracted or sometimes hyper-focused which may make him/her struggle to switch focus to other activities and he/she becomes forgetful (Phillips, 2018). The symptoms present in the *Predominantly Inattentive Presentation*

include a persistent pattern of inattention and lack of focus that interferes with the individual's functioning and development. According to the APA (2013), six or more symptoms should appear in children up to the age of 16 and five or more for children at the age of 17 and adults. The symptoms include failure to pay close attention and making careless mistakes. The individuals would have trouble fixing their attention on tasks, seem as if their minds are wondering when spoken to and fail to follow instructions or complete tasks such as schoolwork or their duties. These individuals would also find it hard to organise tasks and they would be reluctant to do activities that require mental effort, especially over a prolonged time. They also are forgetful, easily distracted, and often lose things that are necessary to complete tasks; for instance, at school they would forget books, pencils, eyeglasses, paperwork and so on (APA, 2013).

The *Predominantly Hyperactive-Impulsive Presentation* is another type whereby the individual fidgets and talks excessively (APA, 2013). These individuals may find it challenging to sit quietly for long periods; for instance, while waiting for a meal or doing their homework. They may feel restless and have problems with impulsivity. Children up to the age of 16 years with predominantly hyperactivity and impulsivity presentation display six or more symptoms whilst children at the age of 17 and adults would present with five or more symptoms (APA, 2013). Individuals diagnosed with this type of ADHD presentation would often squirm in their seats, and they would also leave their seats in situations when it is expected for them to be seated. They would also be restless and would appear to be on the go always. They also would find it hard to keep quiet, they often talk excessively and would give answers to questions before the questions are completed. They would also be disruptive to others or be intrusive towards other people (APA, 2013).

Such individuals may interrupt other people while they are speaking, because they lack restraint in behaviour, or they might even say inappropriate things sometimes without thinking. They may also find it difficult to listen to directions, probably because they lack attention; thus they fail to memorise information for later retrieval since, for instance, working memory has a positive relationship with attention (Kasper et al., 2012). Due to their lack of restraint and being impulsive, individuals living with the *Predominantly Hyperactive-Impulsive Presentation* are more likely to find themselves in accidents or being injured (Brunkhorst-Kanaan et al., 2021). The *Combined Presentation* is a type in which many, or all of the symptoms of the above two types are equally present in the individual (APA, 2013).

2.4 The history of ADHD

Throughout the history of human beings, being hyperactive has been observed as part of human nature and hyperactive behaviour has not always been recognised as a problem. What is now known as ADHD was first noticed in 1798 by Sir Alexander Crichton, a Scottish doctor (Advokat & Vinci, 2012). He observed that some individuals were more susceptible to being distracted and found it harder to obtain and maintain attention than others. He also reported that these individuals depicted this behaviour and symptoms from an early age.

ADHD was first diagnosed in 1902 by a pediatrician, Sir George Still, who explained the condition as a strange atypical moral control in children (Martinez-Badía & Martinez-Raga, 2015). He noticed that compared to their peers, the children who suffered from this condition did not conduct themselves according to their age and found it hard to regulate their behaviour. However, he also noted that these children were not less intelligent than their peers (Martinez-Badía & Martinez-Raga, 2015). Still's studies also showed that males were more likely to be

diagnosed with ADHD compared to females (Mowlem et al., 2019a). It was not until the 1960s that the APA conventionally acknowledged the condition as a mental disorder and by the 1980s it became known as attention deficit disorder with or without hyperactivity.

The American Psychiatric Association (APA) did not recognise ADHD in the first edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM). The second edition of the DSM was published in 1968. This edition included *Hyperkinetic Reaction of Childhood* for the first time (Adam & Young-Walker, 2014). The third edition of the DSM-III published in 1980 changed the name of the condition from *Hyperkinetic Reaction of Childhood* to *Attention Deficit Disorder* (ADD) with two subtypes; namely ADD with hyperactivity and ADD without hyperactivity.

The revised version of the DSM-III changed the name of the condition to Attention Deficit Hyperactive Disorder (ADHD) and included the three symptoms of hyperactivity, impulsivity and inattention (Gomez, 2016). The fourth edition released by the APA in 2000 maintained the name Attention Deficit Hyperactive Disorder and introduced the three subtypes of ADHD being used currently by healthcare personals, which includes the *Predominantly Inattentive Presentation, Predominantly Hyperactive-Impulsive Presentation*, and the *Combined Presentation* (Sonuga-Barke & Taylor, 2015).

2.5 Symptoms and prognosis of ADHD

According to Martel et al. (2012), the presentation of ADHD symptoms is not absolute since it can change over time and is different for everyone. ADHD starts in childhood and only in recent years has it been found to continue into adulthood (APA, 2013). Its presentation in childhood, adolescents and adulthood will vary for different individuals which reflects the

differences in their intellectual level and the differences in their executive functioning (Agnew-Blais et al., 2020). It should be noted as mentioned earlier in the different ADHD presentations section, children always show more symptoms compared to adults in their presentation of ADHD.

The DSM-5 also shows that one does not have to present with all the symptoms set out in the DSM-5 criteria to be diagnosed with ADHD. This is also true for its presentation in males and females which may not be the same and for this reason, males are more prone to being diagnosed with ADHD than females (Arnett et al., 2015). By nature, boys tend to be more physical and overt in their behaviour compared to girls. Females reported more internal problems such as feelings of anxiety on the self-reporting scales for ADHD, compared to males (Øie et al., 2018). It is easier to see aggressive and destructive behaviour in males than to observe the emotional challenges faced by females living with ADHD (Mowlem et al., 2019b). Females are generally more subtle in how they conduct themselves and show more mature behaviour, meaning prominent features or symptoms of ADHD might go by unseen; thus, making the appropriate diagnoses of ADHD challenging for mental health professionals when it comes to females (Skogli et al., 2013).

Although ADHD affects individuals differently, it still has an impact on anyone living with it. Due to its influence on behaviour, feelings and thoughts, ADHD influences the development of one's self-esteem and social interactions, which may cause problems regarding academic and work life for someone living with it (Gordon & Fabiano, 2019). This can be attributed to the *Inattentive Presentation and the Hyperactive-Impulsive Presentations* (APA, 2013) that can be a hindrance towards one completing one's daily activities. This can cause personal distress for the individual diagnosed with it. One should bear in mind though that the

presentations are not absolute and can change over time and are different for everyone (Martel et al., 2012).

ADHD cannot be cured, but its symptoms can be treated for individuals to manage their lives (Moon, 2021). According to Anixt et al. (2016), some of the children who are diagnosed with ADHD will outgrow the symptoms of ADHD; however, many of the children do grow up to live with them. This essentially means that the individuals will show a decline in the presentation of the symptoms as they age and some will be able to manage them as they grow, mature and develop an appropriate coping mechanism for the condition's symptoms. Some professionals argue that although ADHD has no cure yet, identifying it early and having a good treatment plan can help individuals living with the condition manage their symptoms better (Venkata & Panicker, 2013). By helping the person living with ADHD deal with the symptoms of ADHD, the mental healthcare professional provides the individuals living with the condition with the necessary tools to enable them to understand and manage their lives better.

2.6 ADHD treatment and management

Standard treatments for ADHD in adults incorporate pharmacology and psychotherapy (Aranas, 2020). Integration of these treatments is the most effective approach (Giuliano & Geyer, 2017). It is important to note that these treatments only help to address the symptoms of ADHD and they do not necessarily cure it (Purkayastha et al., 2015). The first line of treatment for ADHD is pharmacological treatment, stimulants in particular (Shier et al., 2013). Stimulants include products such as methylphenidate or amphetamine, which are the most commonly prescribed medications for ADHD, although other medications may be prescribed.

Stimulants have been found to bring about a balance in the neurotransmitters to help with effective communication between nerve cells (Glaser et al., 2012). This is because too much or too little of any of the neurotransmitter can alter the way one thinks, feels and behaves. Thus, neurotransmitters ultimately affect a variety of psychological functions such as fear, temper, and happiness. In cases where the neurotransmitters are not balanced, it could lead to conditions such as anxiety, depression, adrenal dysfunction, hormone dysfunction, ADHD, Alzheimer's disease, Parkinson's disease, or early death (Mobed et al., 2020).

It is important to note that the right medication and dosage vary according to the individual needs of the patient (Surman et al., 2013). This relates to the mere fact that ADHD manifests in different ways within different people, which means that different treatment plans will be employed for different people (Martel et al., 2012). One disadvantage of pharmacological treatment may be the side effects of medication because it might require the inclusion of additional medication to remedy or reduce the side effects of the initial ADHD treatment (Charach & Fernandez, 2013). These side effects may include developing drug dependency or psychomotor retardation and there may also be issues such as compliance problems with the patient. This is because symptoms of ADHD can have diverse effects on the daily lives of individuals living with it. Since ADHD symptoms may affect abilities such as planning and organisational skills, this can lead to one skipping or forgetting to take medication.

Some of the additional common side effects of stimulants include loss of appetite, anxiety, dry mouth, headaches, mood swings, increase in blood pressure and insomnia (Bioulac & Franco, 2021). Most adults find that long-acting stimulants are more effective for them (Safer, 2016), which may be beneficial because they do not have to remind themselves to take the medication several times a day (Charach & Fernandez, 2013). The option to only medicate once

a day can be important because most adults with ADHD are bound to take medication for the rest of their lives whilst others will be able to discontinue as they grow older (Anixt et al., 2016). Although stimulants are effective, not everyone will benefit from them, and it is advisable to consult with a professional psychiatrist or medical doctor so that the optimal and effective treatment plan can be designed for the identified patient (Volkow & Swanson, 2013). In situations where stimulants are not an option, atomoxetine (Strattera) is an option, which is the first non-stimulant approved to treat ADHD (Clemow, 2014). Strattera works on the neurotransmitter called norepinephrine, by increasing its amount in the brain, which in turn increases attention span and reduces impulsive behaviour and hyperactivity in the person living with ADHD.

Another treatment option includes psychotherapy, which generally includes psychological counselling, psychoeducation about the disorder, and learning skills to help one successfully manage the condition (Wampold, 2019). Psychotherapy is aimed at improving aspects such as an individual's time management, and organisational skills, and also helps to regulate impulsive behaviour. Psychotherapy is effective in helping one develop appropriate problem-solving skills, particularly regarding academics, work, and social interactions, which can help improve the individual's self-esteem (Philipsen, 2012). Psychotherapy helps individuals and their families learn about ADHD, how it works, and how to manage it (Geffen & Forster, 2018).

Some of the common types of psychotherapy include cognitive behavioural therapy (CBT), marital counselling, and family therapy. CBT is a structured therapy that helps a person learn skills to address dysfunctional behaviour and aims to change the negative beliefs and thoughts one holds about oneself into positive ones (Ramsay & Rostain, 2014). Thus, it is ideal

for addressing school, work and relationship challenges, as well as other mental health conditions and overall life stressors. Marital counselling and family therapy focus on providing help and education to the identified patient, their partners or family regarding the challenges of staying with someone diagnosed with ADHD. Thus, it provides them with information and skills they can use to cope with the condition and support each other (Jans & Jacob, 2013). Marital counselling and family therapy are important in helping towards developing positive social interactions and adopting constructive coping skills (Dattilio & Epstein, 2015).

The appropriate medication and a good psychotherapist are a potent combination in treating someone living with ADHD (Giuliano & Geyer, 2017). Therefore, effective treatment is one which uses both psychotherapy and pharmacology approaches depending on the symptoms the treatment is aimed at addressing, as the research suggests (Aranas, 2020). The typical management and treatments for ADHD in adults normally includes medication, psychoeducation, social skills training, and counselling. This approach is the most effective, but it is also important to remember that the combination may help manage many symptoms of ADHD, but they do not cure the condition (Climie & Mastoras, 2015). Although ADHD is one of the most researched and studied neurodevelopmental disorders, this gap regarding finding a cure shows that more extensive and advanced knowledge of this complex disorder needs to be acquired to help improve people's lives.

2.7 Challenges of students living with ADHD

Most students are at the age where they are transitioning from the adolescent stage towards adulthood. These transitions and growth are referred to as *Emerging Adulthood* (Arnett, 2014a). From the ages of 18 to 25 years, these individuals get to encounter numerous and unique

challenges and problems, which include having to decide whether they want to enrol in colleges or universities, how to manage newfound autonomy and freedom from guardians, how to establish and develop serious romantic relationships, and even whether to try out drugs (Arnett, 2014b).

According to Green and Rabiner (2012), some of the challenges encountered by students with ADHD in higher education institutions include persistently poor time management and organisational skills. Students in higher education institutions living with ADHD may have difficulties recalling important information, paying attention, or maintaining focus during lessons (Kwon et al., 2018). They may also experience trouble with complex tasks that require significant mental energy or attention (Fleming & McMahon, 2012). All of these aspects are important self-regulatory skills essential for school readiness and future achievement and they also consist of both behavioural and cognitive processes that are vital for one to succeed in learning (Liew, 2012).

Research shows that students living with ADHD are less likely than their peers to graduate from high school and they experience more academic difficulties than individuals living without ADHD (Burlison & Dwyer, 2013). They are less likely to enrol in post-high school education of any kind (Green & Rabiner, 2012). Students, living with ADHD, who do enrol at college tend to report more problems and higher levels of depressive symptomology in the first semester compared to their non-ADHD peers (Green & Rabiner, 2012). Furthermore, research shows that students living with ADHD are most likely to drop out of high school and are prone to experiencing numerous academic stresses and problems compared to their peers living without ADHD (Martin, 2014b), which is similar to the study conducted by Gordon and Fabiano (2019), which stipulates that students living with ADHD encounter more academic challenges compared

to their peers. Individuals living with ADHD tend to have lower higher education grades, inadequate study strategies and tend not to take part in most of their classes (Prevatt, 2016).

Individuals diagnosed with ADHD are more likely to develop low self-esteem and poor social skills compared to students living without ADHD (Fleming & McMahon, 2012), and they are more likely to interrupt their higher education studies and graduate at lower rates (Fried et al., 2016). Thus, it is imperative to gain insight and understanding of the challenges encountered by students diagnosed with ADHD from their perspective using their own words so that appropriate interventions can be developed for them, which is important because ADHD symptoms do not only affect the individual diagnosed with it. These symptoms of ADHD also influence the individual's surroundings and the relationship between the too (Swift et al., 2013). Taking into consideration the impact and influence of the symptoms of ADHD on an individual regarding their meatal health, social interactions, and physical development, it is imperative to enquire about and understand the well-being of these identified individuals and the population as a whole.

2.8 Psychosocial well-being

The term psychosocial well-being, for this study, refers to the emotional, psychological, social, spiritual, and physical factors of an individual's life holistically (Eiroa-Orosa, 2020), which refers to the quality of life. It also includes an individual's ability to cope with the various difficulties of everyday life and the appreciation of their potential as individuals to be productive members of society. Psychological well-being takes into consideration domains such as physical, economic, social, psychological, emotional, cultural and spiritual as determinants of one's well-being.

2.8.1 Psychological components

The term ‘psychological’ refers to the human mind and feelings and the ability to understand them (Jung, 2016). Psychological components include one’s ability to process and make meaning of situations that influence an individual’s mental state, perception, feelings and attitude. Thus, ADHD can influence the individual’s capacity to pay attention or concentrate, which affects the ability of individuals to fully apply themselves to their school work.

Individuals living with ADHD are more likely to use tobacco, marijuana, alcohol, and cocaine (Dalsgaard et al., 2014) and are most likely to be diagnosed with substance abuse or substance use disorder (Fleming & McMahon, 2012). Research shows that students with ADHD experience problems that go beyond ADHD symptoms, and these include psychological disturbances and mental shortcomings such as memory issues and the development of psychological distress or difficulties (Gray et al., 2016). All of this influences the predictability of their academic success and interaction with people (Brod et al., 2012b).

2.8.2 Social Components

2.8.2.1 Interpersonal Relationships

According to Hosain et al. (2012), individuals living with ADHD are more prone to have many intimate partners in their adulthood and are more likely to engage in casual sex. Individuals diagnosed with ADHD are more likely to fall pregnant during their teenage years and experience higher rates of sexually transmitted illnesses (Anastopoulos & King, 2015), which is most probably attributed to their impulsive nature and having many intimate partners. Individuals diagnosed with ADHD tend to experience more intimate relationship complaints and

experience higher levels of divorce, thus they tend to remarry more than people living without ADHD (Anbarasan et al., 2020).

Individuals living with ADHD tend to have dysfunctional coping mechanisms within their romantic relationships (Anbarasan et al., 2020). This dysfunctionality may be caused by their impulsivity which leads to irrational decision-making and lack of attention to details such as the emotions of the people they are close to. Thus, they are more likely to experience more social shortcomings (Meisinger et al., 2015). In the social domain, they may appear as rascals or deviants who find it challenging to form positive relationships with other people because of the condition they are living with and its symptoms. Males living with ADHD have been reported to have higher levels of verbal aggression and exhibit high levels of violence towards their intimate partners (Wymbs et al., 2012). This could be explained by the mere fact that males tend to be overt in their aggression; for instance, they are more likely to be physically aggressive and show little restraint which would also explain why it is easier for mental practitioners to identify and diagnose them compared to females (Arnett et al., 2015).

2.8.2.2 Education and occupation

According to the APA (2013), ADHD affects about 8.4 per cent of children and 2.5 percent of adults (Paling, 2020). The National Institute of Mental Health approximates that the numbers may be higher since most girls and adults with ADHD go undiagnosed. Jans and Jacob (2013) state that individuals living with ADHD are more likely to have interpersonal conflicts at work with their colleagues and superiors. This interpersonal conflict is also highlighted by Deal et al. (2015), who state that low self-esteem and the lack of social interaction brought by ADHD can cause problems regarding academics and the work life of someone living with it. Education

might not be one of the best indicators of psychological well-being, although according to *The Six-Factor Model of Psychological Well-Being* theory developed by Carol Ryff, occupation is a good indicator of psychological well-being since it can offer one purpose and meaning in life (McNulty & Fincham, 2012).

2.8.3 Physical components

ADHD has some physical health concerns for individuals living with it, besides being fidgety, restless, talking too much, or being disruptive (APA, 2013), ADHD can also cause individuals not to take good care of their physical health. Impulsivity, lack of motivation, emotional concerns, and disorganisation as part of ADHD, are some of the symptoms of ADHD that affect individuals' ability to maintain one's physical health.

According to Romo et al. (2018), some of the signs that someone living with ADHD is neglecting their physical health, including compulsive eating, an imbalanced diet, and the lack of, or forgetting to, exercise. The person living with ADHD will tend to experience significant stress and anxiety that is brought about by the symptoms of living with ADHD, which is not good for one's health. In cases where individuals fail to manage their health habits due to ADHD, the effects of ADHD can exacerbate, or lead to, the development of physical health conditions.

According to Du Rietz et al. (2021), adult men and women diagnosed with ADHD are more susceptible to developing nervous system disorders such as sleeping disorders, dementia, epilepsy and respiratory diseases such as asthma and chronic obstruction pulmonary diseases. This goes to show how ADHD can adversely affect an individual's physical health, which in turn can impact their psychological well-being.

2.9 Conclusion

This chapter has shown that ADHD is a neurodevelopmental disorder that can affect anyone and is prevalent around the world. Previously thought to be a childhood disorder, it has been found to prevail into adulthood. Currently, little is known about the disorder in the adult population compared to its presentation in childhood and how to manage and treat it. The DSM-5 recognises its three subtypes, the *Predominantly Inattentive Presentation, Predominantly Hyperactive-Impulsive Presentation* and the *Combined Presentation* which are based on how the symptoms manifest in an individual. It was interesting to observe that in adulthood, individuals living with ADHD tend to be less likely to show high levels of impulsivity and hyperactivity because of the maturity and restraint that comes with being an adult.

The disorder has been found to adversely affect individuals living with it in numerous ways, thus making life difficult for them and the people they live with closely, such as family and friends. Pharmacological treatment and psychotherapy are the primary modes of treating and managing ADHD, with pharmacology being the first line of treatment although some authors argue that CBT is best in that it has long-term effects. The literature shows that the condition has serious implications on the academic and work competency of most people diagnosed with it, not because they are not intelligent but because of the symptoms (inattention, impulsivity, and hyperactivity) that come with the condition.

Most students living with ADHD in colleges and universities do not perform at the same level as their peers or to their optimal potential. More research still needs to be done regarding ADHD and how, or to what degree, it affects the South African population, particularly regarding their psychosocial well-being. Taking into consideration the pervasive nature of ADHD and the difficulties that come with it, more direct information from those living with

ADHD is needed to help enhance the living experience of the student population living with this condition.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter helps provide detailed information regarding what the primary researcher did and how he did it, thus allowing future researchers or readers to evaluate the consistency and soundness of the study. A qualitative descriptive research design was used to obtain information from the participants. This research design was important in helping the primary researcher obtain data from participants accurately without making inferences. Semi-structured interviews were conducted to gather data verbally from the participants to explore the psychosocial well-being of NWU students living with symptoms of ADHD. This data collection method was ideal because it allowed the researcher to obtain information regarding the experiences of the students living with ADHD.

3.2 Qualitative research approach

Qualitative data collection was employed in this study because the researcher wanted to obtain in-depth information from the subjective experiences of the participants. According to Smith and Shinebourne (2012), qualitative research is essentially a systematic, interactive, and subjective approach used to describe life experiences and give meaning to these, providing information that is represented in narratives or verbal forms. The comprehension of human behaviour in natural settings is of paramount importance to understanding behaviour because realities cannot be understood from outside of their contexts (Phillippi & Lauderdale, 2018). The

primary researcher utilised thick descriptions to explore and describe the psychosocial well-being of students living with symptoms of ADHD. Through the application of the qualitative research approach, he gathered an in-depth understanding of the students' personal experiences of living with symptoms of ADHD; therefore, understanding their behaviour and the reasons that govern such behaviour without making assumptions. Furthermore, a qualitative research approach was chosen due to its flexibility (Tian et al., 2016) and the ability to unearth firsthand information from the participants.

3.3 Research design

In support of the qualitative nature of the study, this study made use of qualitative descriptions which, as the name implies, is a descriptive approach with less interpretation compared to other qualitative research designs (Lambert & Lambert, 2012). A qualitative descriptive design does not necessarily rely on inferences made by the researcher, but rather the researcher strives to understand accurately what the personal experiences of the participant are (Sandelowski, 2010). Through this approach, the primary researcher was able to explore and describe comprehensively the psychosocial well-being of NWU students living with symptoms of ADHD by creating a realistic image from the data provided by the students about their personal experiences.

3.4 Population

The population and focus for the study were NWU students from all three campuses living with symptoms of ADHD. The NWU is a South African university made up of three campuses at Potchefstroom and Mahikeng, which are located in the North-West province, and the Vanderbijlpark campus, which is located in the Gauteng province. The NWU's diversity

provides an aligned status, thus making it one of the largest universities in South Africa. The NWU is a multiracial university with a diverse student population (North-West University, 2017). The total number of on and off-campus students enrolled at the North-West University by 2017 was 72 994. The Potchefstroom campus had 52 360 students, the Mahikeng campus had 12 709 students and the Vanderbijlpark campus had 7,925 students. The male students accounted for 34% and females accounted for 66% of the student population (North-West University, 2017). The total number of on and off-campus students enrolled at North-West University by 2020 was 58 356. At the beginning of 2021, the number of undergraduate students was 49 007 and postgraduate students 9 058 and the number of occasional students were 291 (North-West University, 2021).

3.5 Sampling method, technique, and size

A purposive (judgmental) sampling technique was utilised, which is a sampling technique that is based on the subjective judgment of the researcher to select appropriate or relevant participants for the study (Etikan et al., 2016). The purposive sampling technique allowed the primary researcher to sample only the participants meeting the requirements of the inclusion criteria. This also ensured that the students chosen were able to answer the questions that needed to be addressed by the study. The students forming part of the inclusion criteria were NWU students living with symptoms of ADHD. They were 18 years of age or older, as the focus of the study was on adults living with symptoms of ADHD. The participants had to be efficiently fluent in English or Setswana as the informed consent forms were in these languages and the data collected took place in these languages too. The language of teaching and learning at the NWU is predominately English and the Mahikeng campus is predominately made up of a Setswana-speaking student population. The primary researcher did Setswana as his home language in high

school and English as his second additional language and is, therefore, able to communicate, read and write in these languages adequately. Most importantly, the students were willing to participate and gave written informed consent. It is important to note that participants had not been diagnosed with ADHD or any other co-morbid mental health disorder such as depression or anxiety because these mental health disorders may present with symptoms that are similar to ADHD and this study specifically focused on adults living with symptoms of ADHD. Nevertheless, they were chosen because of the symptoms they presented.

The ideal sample size for qualitative research is from five to 50 participants (Dworkin, 2012). This study used a qualitative descriptive design where a minimum of 12 participants were selected and at this point, data saturation was reached. This means data had reached a point where the information was repetitive, and no new patterns were emerging from the data collected through qualitative interviews and the themes became repetitive (Walker, 2012).

3.6 Data collection method

The data collection occurred electronically through the use of online semi-structured interviews. The questions on the interview schedule were open-ended and allowed for flexibility and more in-depth answers from the participants' personal experiences, which helped the primary researcher to gain a comprehensive experiential understanding of the psychosocial well-being of students with symptoms of ADHD.

3.7 Data gathering process

Before starting with the research study, the primary researcher presented this study to the Subject Group Psychology on the Mahikeng campus at the NWU. After his presentation he went on to send his study to the Community Psychosocial Research (COMPRES) Scientific

Committee for approval, followed by a request for approval to do the study from the Health Research Ethics Committee (HREC) of the Faculty of Health Sciences, NWU (See Appendix D). After approval of the application by HREC, permission was obtained from the Research Data Gatekeeper Committee (RDGC) (See Appendix E).

To recruit participants, an advertisement was distributed by the researcher on the NWU student Facebook pages and eFundi (See Appendix C). The advertisement had a Google link, which when clicked, led participants to a detailed form which gave clarity about the research, as well as allowed participants to fill in their names, email addresses and contact details. After indicating their willingness to participate, an independent person contacted participants through cell phone and/or email. The independent person was an NWU psychology student who was doing his master's in clinical psychology at the time of the data-gathering process. The independent person was trained by the researcher to understand the study.

The independent person sent the informed consent forms through email to allow participants to familiarise themselves with the informed consent form. Potential participants were given a week to evaluate and familiarise themselves with the informed consent form and decide about their participation. The independent person and participants set an appropriate date and time (through the phone/email) for both parties to meet virtually to explain and discuss the contents of the consent form and sign them. From 6 to 17 June 2022, the independent person and participants individually signed the consent forms, each in front of a witness on the days they agreed on.

After signing the consent forms, participants were requested to take a picture of the signed consent form and send it to the independent person electronically. After receiving the

consent forms from participants, both the researcher and individual participants set a date for a Google Meet interview.

3.8 Data collection setting

The participants were asked to find a quiet and private location when doing the online interviews to ensure privacy and enhance trustworthiness. They were also encouraged to ensure that they have stable connectivity. There were limited if any, financial implications for the participants, depending on whether they stayed in NWU residences or not. Students who stayed at NWU residences were able to use the university's Wi-Fi, whilst others who needed data for connectivity requested it from the primary researcher. Before taking part in the study, participants were told to request data vouchers from the independent person if they needed them for the semi-structured interviews; the independent person informed the primary researcher via his email or cell phone number. This information regarding the need for data was stated on the consent forms. From there the primary researcher and participant scheduled a date and time when they would meet for the online semi-structured interview. As a token of appreciation, to compensate for the participant's time and energy they all received a R15.00 airtime voucher within 24 hours sent to their emails after completing the interview.

The questions that were asked were reviewed by the primary supervisor who is registered with the HPCSA and the co-supervisor who is registered with SACSSP. They are a clinical psychologist and social worker respectively and are qualified to supervise the study. The questions were also reviewed and affirmed by the COMPRES scientific committee and the HREC of the Faculty of Health Sciences at North-West University. The questions were the

following, although there were also probing and follow-up questions, as is familiar in a qualitative process:

- As a student with ADHD symptoms, tell me about your challenges regarding your psychosocial well-being.
- As a student living with symptoms of ADHD, tell me about your positive experiences regarding your psychosocial well-being.
- What recommendations can you make to the university to improve the experience of psychosocial well-being for students living with symptoms of ADHD?

3.9 Data storage

To ensure confidentiality, the collected data was saved on the primary researcher's personal computer, which is password protected. Anonymised data was sent to the supervisors whose computers are also password protected, as well as to an independent co-coder, who was doing her second year of a master's degree in clinical psychology and received training to do thematic analysis at her honour's level. Recordings were deleted from the computers once transcribed and archived, together with all the other data, at an indicated area within the department on the Mahikeng campus. Furthermore, the data will be stored for a period of five years for the purpose of verification and analysis, and then destroyed.

3.10 Trustworthiness

To ensure and maintain the quality of trustworthiness the primary researcher looked at the four criteria as identified by Lincoln and Guba (1985) to ensure the trustworthiness of qualitative research. These four criteria included:

1. Dependability: Refers to the consistency of data or information,

2. Confirmability: Refers to avoiding research bias,
3. Credibility: In short, this refers to the extent to which a research account is believable and appropriate, and
4. Transferability: Refers to the findings being able to be transferred into other contexts (reliability).

Table 3.1 below shows the measures used to guarantee the required standards in the study.

Table 3.1
Measures to ensure trustworthiness

Criteria	Measures
Dependability – consistency of data or information	• To ensure consistency and enable other researchers to reproduce the study, the primary researcher gave a detailed and point-by-point description of the study; for instance, concerning the research method, data collection and data analyses. • Code-recorder procedure: After identifying the themes the primary researcher reviewed the themes with the help of his supervisors and an independent co-coder (postgraduate psychology student) who was trained to do thematic analysis at her honours level. • Audit trail: The primary researcher kept the email messages and other communication messages that could help contextualise the participants' responses by keeping records of them.
Confirmability	• Audit trail: The primary researcher kept the email messages and other communication messages that could help contextualise the participants' responses by keeping records of them. The specific

	questions asked, as well as the prompts, were also available for reference. The proposal and therefore the approach to the study were on record for future reference. • Reflexivity: From the beginning to the end of the research the primary researcher reflected honestly and critically to avoid any form of bias that could affect the whole study. For instance, he reflected from the point of development of data, collection of data, analysing and even reporting it. All this he did by staying objective throughout the study. The direct quotes of the participants enabled him to reflect honestly on the data.
Credibility	• Reflexivity: To ensure credibility, the primary researcher in some analyses used direct quotations from the participants' responses. • Peer review: The primary researcher made efforts to stay in communication with his study leaders for supervision and he also consulted with experts in the field of ADHD (or mental health professionals, such as clinical psychologists, medical doctors or psychiatrists), qualitative researchers and relevant lecturers.
Transferability	• The research included a comprehensive and detailed description of the research method, data collection, and data analyses (the whole research process) to ensure consistency and the ability for other researchers to replicate the research; for instance, in different contexts or with different age groups. However, due to the qualitative nature of the study, it was not possible to generalise the findings.

3.11 Data analysis methods

The primary researcher employed thematic analysis. Thematic analysis is the process by which themes within qualitative data are identified (Alhojailan, 2012). This method was best suited to this study because it can be used to analyse different forms of data including written narratives or written answers to open-ended questions. According to Braun and Clarke (2006), there are six steps of thematic analysis, and these include:

1. Step 1: Become familiar with the data.
2. Step 2: Generate initial codes.
3. Step 3: Search for themes.
4. Step 4: Review themes.
5. Step 5: Define themes.
6. Step 6: Write up the report.

The primary researcher went through the responses on the personal experiences of students living with ADHD. Whilst going through the responses he identified codes to be used for the emerging themes from the data. After identifying the themes, he reviewed them with the help of his supervisors and an independent NWU psychology student who is currently doing her master's in psychology and has been trained to do thematic analysis. From there, the themes were well-defined, and the primary researcher wrote them up.

3.12 Conclusion

This chapter explained in detail the research approach that was employed in the study to aid in achieving the aims and objectives of the study. The research methodology was outlined in

detail and its significance in assisting towards answering the research question was explained. A qualitative enquiry was important in that the personal experiences of individuals living with ADHD could be understood and to help achieve this, the descriptive research design was suitable particularly because the primary researcher wanted to gather data on NWU students living with symptoms of ADHD accurately without inferences so that their reality could be narrated or reported as it is. The data-gathering framework was explained in-depth which will help future researchers replicate the study. Throughout the entire process, the primary researcher ensured that he followed the ethical guidelines and maintained integrity throughout the process. The four criteria for ensuring trustworthiness, as identified by Lincoln and Guba (1985), were taken as measures to guarantee the required standards in the study and maintain quality. During data analysis, the themes were identified within the narrative responses of participants, and this was done without bias.

• CHAPTER FOUR

• FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter will outline in detail the data collected and present the themes as they emerged comprehensively from the findings gathered through the exploration and description of the psychosocial well-being of the participants with the aid of Bronfenbrenner's ecological systems theory. The findings will be discussed jointly with the literature identified in Chapter One and Chapter Two. The researcher took the liberty to not include the demographic section since the participants were supposed to be any age above 18 and the university is multiracial, for instance. The study included 12 participants made up of seven females and five males.

4.2 Themes and subthemes

Table 4.1 below includes the identified themes from interviews with the participants. The first column has the themes. Whilst the second column has the subthemes. Below the table are the themes presented in an orderly manner following the structural nature of the interviews, introduced in a narrative form and aligned to the study objectives.

Table 4.1:
Themes and subthemes

Main theme	Subtheme
Theme 1: Psychological and social challenges that affect the student's psychosocial well-being	Subtheme 1: Inattention and hyper-impulsive symptoms Subtheme 2: Anxiety Subtheme 3: Depression/low mood Subtheme 4: Isolation and withdrawal Subtheme 5: Long lecture time
Theme 2: Psychological and social factors that contribute to the student's psychosocial well-being	Subtheme 1: Responsibility and accountability Subtheme 2: University supportive structures and lectures Subtheme 3: Online classes and alternative teaching techniques
Theme 3: Recommendation by participants to help improve the psychosocial well-being of students	Subtheme 1: Student/ lecturer evaluations Subtheme 2: Mental health education Subtheme 3: Timetable and class adjustment Subtheme 4: Rest and sleep

4.3 Findings and discussion

4.3.1 Theme 1: Psychological and social challenges affecting psychosocial well-being

Students presenting with symptoms of ADHD sometimes encounter numerous challenges that have adverse effects on their daily lives. Compared to an average student without ADHD symptoms who faces challenges such as adjustment to being a university student, the participants' challenges are compounded by their conditions relating to ADHD symptoms. Most parts of the students' lives are affected including their psychological and social well-being.

Research shows that the problems that they face go beyond ADHD symptoms and these include psychological disturbances and mental shortcomings such as memory issues and the development of psychological distress or difficulties (Gray et al., 2016). All these influences determine these students' academic success and interactions with people such as family and friends (Brod et al., 2012a).

This can be explained by Bronfenbrenner's ecological systems theory which states that a person's development is influenced by the environment they find themselves in and the interactions that occur within the various spheres of their environment (Martin, 2014a). For instance, most of the identified students presented with inattention and hyper-impulsive symptoms which negatively impact their academic performance and led to them developing anxiety and depressive symptoms which intimately affected their relationships with other people.

4.3.1.1 Subtheme 1: Inattention and hyper-impulsive symptoms

According to the Diagnostic and Statistical Manual of Mental Disorders, DSM-5 (APA, 2013), the three different types of ADHD presentations and the diagnoses are based on which types of symptoms are dominant in the individual. This includes *Predominantly Inattentive Presentation, Predominantly Hyperactive-Impulsive Presentation*, and *Combined Presentation*, which incorporates both *Predominantly Inattentive Presentation* and *Predominantly Hyperactive-Impulsive Presentation* (APA, 2013). It should be noted that this study focused only on the symptoms of ADHD.

Inattention, which is perhaps one of the greatest challenges experienced by students living with symptoms of ADHD amongst being impulsive and hyperactive, seems to be the most prominent and identifiable problem faced by the participants. One of the students, Participant 4 reported the following: "*To maintain attention I sit in front of the class during lectures",* which is an experience shared by most of the participants. Participant 9, mentioned the following regarding her

attention difficulties: *"I do not like attending classes, lectures are boring and I end up sleeping in class, thus I feel like am wasting my time by going to class".*

ADHD symptoms have adverse effects on students' academic performance and life in general (Green & Rabiner, 2012). *"My inattention negatively affects my academic performance because I end up lacking understanding",* says Participant 7. This leads to the students' adopting ways in which they can remedy their shortcomings, such as Participant 6 who stated, *"To help with my attention problems, I study alone when I get home".*

Other students who experienced *Predominantly Hyperactive-Impulsive Presentation* symptoms like Participant 4, stated the following: *"I always feel the need to do something".* Participant 8 mentioned the following, which is in line with the above statement, *"I cannot sit still and constantly have to keep busy, because I overthink things, especially academics to deal with my anxiety".* Although some of them mentioned some symptoms that resemble *Predominantly Hyperactive-Impulsive Presentation* symptoms, *Predominantly Inattentive Presentation* symptoms were more prevalent and problematic for the students. No student presented with *Combined Presentation* symptoms. Most of the students reported symptoms of anxiety and depression as a result of perceived or prognosticated failure because of declined academic performance.

4.3.1.2 Subtheme 2: Anxiety

Students at universities encounter numerous challenges and there are high expectations from their families and themselves to do well in their academics (Knouse & Fleming, 2016). This in turn places a great deal of responsibility and pressure to perform up to standard and keep up with their peers. Participant 10 indicated the following: *"My anxiety is time-consuming because I focus so much on it and it greatly affects my focus on subsequent activities which I end up not completing and performing below standard".* This pressure leads to them developing anxiety symptoms because of the fear of failure (Beiter et al., 2015). Most of the students mentioned that they would find themselves being restless and experiencing difficulty concentrating because of the fixation they

have on the outcome of events, and they even constantly worry about academics and their social relationships. Participant 9 mentioned, *"I do not like being around other people or even going out as a result of my anxiety".*

To deal with the anxiety some students reported hyperactive behaviours where they would find themselves pacing around the house, finding it hard to sit still and constantly feeling the urge to move around to alleviate the feelings of anxiety, whilst some of the students go to the extent of developing maladaptive coping mechanisms, such as smoking to manage their anxiety, although this is not a prevalent phenomenon. Participant 1 reported the following: *"I smoke cigarettes to manage my anxiety and I would not cope at all if I do not smoke during the day. I smoke five cigarettes on average and 15 -20 on a busy day".* Some students reported developing low moods and diminished interest in taking part in activities or being around people in cases where they do not perform up to expectations, which is congruent with literature regarding ADHD and its effects on the student population (Nelson & Liebel, 2018).

4.3.1.3 Subtheme 3: Depression/low mood

Some of the psychological implications brought about by the symptoms of ADHD in the case of the identified students, are experiencing low moods and diminished interest (Patros et al., 2013). The students reported several reasons that led to them experiencing depressive symptoms. One of the main sources or reasons included their academic life (Combs et al., 2015). Most of the students reported changes in their eating habits, experiencing low energy and lack of interest in many domains of their lives, such as their family and friends. For instance, Participant 4 mentioned, *"My impulsive speaking makes me appear as a destructive individual and a playful joker and it is hard for people to take me seriously"*. This is in line with research relating to the challenges faced by a student living with ADHD and how these challenges can lead to the students developing depressive symptoms (Roh & Shin, 2015).

The students' low moods and depressive symptoms seem to be a byproduct of their daily experiences, and their academic life, in particular. They experience emotional turmoil as a result of their behaviour and its repercussions, which they feel they are responsible for. This is true because most of the participants did not know about ADHD and how its symptoms manifest within individuals. To deal with their shortcoming, they end up developing coping strategies unintentionally to help themselves manage their experiences through withdrawing from situations and other people. For instance, Participant 5 stated, *"Most of the time I am alone, therefore, it is hard for me to say how my inattention affects my relationships".*

4.3.1.4 Subtheme 4: Isolation and withdrawal

To cope with the challenges brought about by the symptoms of ADHD, some students choose to withdraw from society as they see this as an amicable solution to the repercussions of being in a social environment, thus avoiding relationship problems (Brod et al., 2012b). The statement below shows that to some degree the withdrawal tendencies of some students are a coping mechanism. The following is an assertion made by Participant 4 about opting to be alone, *"I appear as if am bored with people or they get bored with me, therefore I will rather be by myself".* Although the above statement is common among the participants, most students do admit to wanting to be around people as they are social beings.

In addition to the above student, Participant 8 said, "T*o avoid having to deal with the backlash of being impulsive I would rather do things alone".* Many studies have reported the fragmented and troubled relationships of individuals like Participant 8 due to their impulsive nature, which is atypical (Shen et al., 2020). Most of the participants mentioned that they find themselves isolated from friends and family because of the perceived inevitability of the interactions ending in a bad way for both parties.

The participants were appreciative of the fact that they may be different from other people and acknowledged that they too were not aware of a mental disorder called ADHD and how it can

impact them. Most of them became familiar with the mental disorder (ADHD) once they saw the advertisement of the primary researcher's study. For this reason, most of them felt that it was their responsibility to teach themselves and others about the disorder, especially the manifestation of ADHD symptoms so they can better manage them and teach other people about them, which would enhance their relationship status.

4.3.1.5 Subtheme 5: Long lecture time

Participants agreed that the NWU standard time for every lecture is one hour. However, most felt that this was too much time spent in one lecture. Participant 12 reported, "*I can maintain attention on an average for 30 minutes".* Most of the students suggested having 30-minute breaks or stretches in between classes to help with attention restoration.

According to Lee et al. (2015), micro-breaks in between classes are good for attention restoration which helps in making the learning and teaching experience more effective. Below is a statement made by the one of students regarding the one-hour classes and the impact this has on her, particularly her attention: *"I lose attention out of the blue whilst doing schoolwork and regain it back after I rest",* says Participant 6. The majority of the students said that the university can increase the number of classes each week and decrease the class time from one hour to 45 minutes at least. Participant 1 supported the above statement by saying the following, "*The University has an option of increasing the number of classes and reducing the amount of time spent in 1 lecture class".* This would not only improve the attention of students, but it would improve the quality of the lecture by making it interesting and engaging for students, which will increase the effectiveness of learning for the classes.

4.3.2 Theme 2: Psychological and social factors that contribute to psychosocial well-being

Although students who are living with symptoms of ADHD encounter numerous obstacles compared to their peers, they showed appreciation and acknowledgement of their capacity to

address and manage some of their problems by applying themselves, whilst recognising and using the resources, such as the university structures and support, for example, the Student Representative Council (SRC). They are aware of some of the attributes they have such as responsibility and reflectivity that comes with being an adult. This is in line with Matte et al.'s (2012) study, which revealed that some of the symptoms of ADHD diminish in adults such as hyperactivity (Fredriksen et al., 2014). This is important to understand because it enables the identified students to recognise that they can overcome their ADHD symptoms and the challenges that come with them. This is because adults develop a coping mechanism to manage their behaviour that might be considered unconventional and disruptive; thus, they can function more normally within society compared to children.

Bronfenbrenner's ecological systems theory identifies and recognises the individual's influence within the ecological system as much as their environment impacts them (Guy-Evans, 2020). The students can recognise and use the resources in their environment to address their challenges and meet their needs in this respect. Thus, the student's temperance and personality influence their perspective and approach to their lived challenges and opportunities. This helps one understand how students are not helpless within their circumstances as a result of their ADHD symptoms and challenges; rather, they are observed as active role players in their lives whether intentionally or not.

4.3.2.1 Subtheme 1: Responsibility and accountability

The manifestation of ADHD in adults somewhat differs from that in children. This is because adults develop coping mechanisms that mask some of their ADHD symptoms; thus, some symptoms may disappear in adults as they grow older. This is in line with the literature about the differences in the manifestation of ADHD presentation between adults and children. Fredriksen et al. (2014) report that although hyperactivity symptoms in adults may diminish, impulsiveness, restlessness and inattention may persist. One of the students, Participant 7 said the following

regarding being a responsible adult: *"I exercise self-restrain because of being grown up".* Participant 4 showed a degree of responsibility and accountability through the following statement: *"I do not see anything that the university is doing to help me with my inattention and I feel like that it is my responsibility to manage it by seeking help where necessary".*

The one fundamental factor that arises from how they deal with their academic challenges and quarrels in their relationships is taking responsibility and accountability for their behaviour. Most of the students are reflective and remorseful and they are motivated to do better in their interactions. Participant 8 said, *"I tend to think about how I could have handled issues differently".* The participants present with a somewhat mature level of temperance, and they show this in how they live their daily lives. These students are willing to learn from their previous behaviour to function normally with little to no psychological impediments.

4.3.2.2 Subtheme 2: University supportive structures and lecturers

According to a study conducted by Stamp et al. (2014) on students diagnosed with ADHD, one of the major difficulties faced by the students is a lack of awareness about the available support for them for ADHD-related challenges. In the same breath, most of the participants mentioned that many lecturers are patient with them even though they might not know what the student is presenting. Participant 3 stated, *"Some lecturers are patient with me and that is helpful",* which is a sentiment shared by many of the participants. Most of the participants highlighted the personal responsibility that one has in this respect for making his or her lecturers, friends and family aware of what they might exhibit during interactions with them.

In support of the above student's statement, another student mentioned the following regarding the availability of support within the university, *"The university is helpful in that there are lecturers who are patient plus there are Student Instructors (SI's), tutors, mentors etc.",* says Participant 12. Supplemental instructors (SIs), tutors, and mentorships were some of the individuals that the participants mentioned as being helpful, especially in the academic domain, and a remedy

for missed information in classes due mostly to their inattention. The relationships with the leaders in these programmes were close, which allowed the students not only to learn alternative ways of studying but also to have close contact with their peers and mentors (Connor, 2012).

Although some participants argued that the university is not doing anything specific for students like them, the primary researcher was aware that this might probably be because the participants were never clinically diagnosed with ADHD or any other mental health disorder; thus, they were not aware of the university's structures such as the disability unit, counselling department or even the student life department.

4.3.2.3 Subtheme 3: Online classes and alternative teaching

Most of the students mentioned how the coronavirus disease (COVID-19), which emerged in the early part of 2020, changed a great deal for them and how they had to adjust themselves during the pandemic. This is not to say that there were no online classes before, but they became predominant during the COVID-19 pandemic. Classes had to be conducted primarily online and much material was uploaded online by lectures. This material could be saved for later use by the students. Although the situation was stressful, many participants mentioned that they saw opportunities within that chaos. Participant 3 mentioned, *"Online classes are useful because they can be saved for later use. Lecturers do upload slides too".* According to a study conducted by Paschal and Mkulu (2020), most of the students in African universities struggled with acquiring the necessary online learning material, such as computer access and data to participate in the online classes.

Since many of the participants had signs of being anxious in social settings and preferred studying alone, this worked out well for them and they reported few academic challenges, if any existed. Nevertheless, Participant 10 felt their performance declined: "*Not being in class caused my performance to decline during the COVID-19 pandemic because I was too relaxed at home".* Some

students during COVID-19 felt that they were reluctant to do their schoolwork, as there was no pressure to do so at home (Osipov et al., 2021).

The material that the lecturers uploaded mainly included PowerPoint slides, which involved short notes, and audiovisual material, such as pictures, videos, voice recordings, and even links to the internet for more information. This offered the students alternative ways they could use to learn. Participant 5, for example, indicated, *"Some lecturers use PowerPoint slides which are accessible at any time and use different mediums such as pictures, videos, recordings etc."*. Other participants mentioned that eFundi, which is the NWU's learning management system, used for learning and teaching, also offered them a safe space where group discussions could occur in chatrooms, which the students felt was not invasive to them and kept the classes interactive and interesting for the students. Participant 9 concurred with the above by stating, *"I don't like attending class because of my anxiety and I prefer online classes because then I do not worry about meeting with people"*.

The only complaint that the participants had was the issue of not having enough internet data whilst at home during the COVID-19 pandemic. Although the university was offering them data, they felt it was not enough. Participant 2 explained the following about experiencing data shortages: *"I enjoyed both the online and physical classes, it is just that during the COVID-19 pandemic I would run out of data sometimes which forced me to go to campus just use the Wi-Fi"*.

The primary researcher expected the students to raise concerns about not having laptops or smart phones to take part in learning during the pandemic. However, to his surprise, the students had the necessary gadgets to participate in the required academic activities at the time. This is probably because the NWU had the initiative to lend students laptops during the pandemic as a relief effort towards helping students to implement the online learning strategy.

4.3.3 Theme 3: Participants' recommendations to improve psychosocial well-being

One major gap in our understanding of ADHD is the personal lived experiences of students living with ADHD within the South African context. It is imperative to perceive and appreciate that most research on ADHD exploration has occurred in clinical settings and has generally utilised quantitative techniques for enquiry (Lefler et al., 2016). In exploring the experiential parts of living with the condition, it is vital to invite the people living with symptoms of ADHD to interact within their daily contexts. This will help to gain direct insight regarding knowledge about ADHD (Gaynes et al., 2014), and how to better manage it.

The attitudes and ideologies that are found within the macrosystem of Bronfenbrenner's ecological systems theory (Guy-Evans, 2020), help explain the extent to which the policies or culture that exist within the university impact the students as much as their internal locus of control is acknowledged. The participants were able to recognise their capacity to influence their environment and interactions but at the same, the breath conceded their limitations in some of the power they have in influencing their learning practices. Most of the power lies with the university management and executives. Thus, the students' recommendations and input are vital in helping to promote and create an environment conducive to effective and efficient learning to occur within the university.

4.3.3.1 Subtheme 1: Student/ lecturer evaluation form

A significant number of the participants suggested student lecturer evaluation forms as part of helping to improve the lecturers' approaches to teaching. These students argued that some lecturers are better than others at teaching certain modules or chapters compared with others. Therefore, student evaluations of lecturers will not only help the lecturers develop themselves but also benefit the students because the lecturers will become more effective (Sherwani & Singh, 2015). For instance, Participant 3 said the following about the lecturer evaluation form *"Lecturers should be evaluated to observe their competence in teaching modules"*.

Another student, Participant 7 stated, *"My interest in modules is based upon the lecturer who is teaching and the module itself", w*hich proves the need for lecturer evaluations by students. Student evaluation of lecturers will benefit both the lecturers and the students, especially ones with special needs and preferences, such as students living with symptoms of ADHD. Lecturers will not only become aware of their blind spots and shortcomings but also will recognise their strengths and advantages, which when identified, they will be at liberty to promote and develop (Boring & Ottoboni, 2016). Student evaluations of lecturers will provide some sense of empowerment to the students, as they will have an internal locus of control and realise that they can influence and be actively involved in making decisions about their education.

4.3.3.2 Subtheme 2: Mental health education

Perhaps one of the most practical educational recommendations made by the participants was mental health education or mental health campaigns. Most participants felt that there was a great deal that the university could achieve through holding educational programmes to help spread or build mental health awareness in general around their respective campuses. This broad approach was supported by Participant 12 who stated, *"The NWU should hold mental health campaigns that do not necessarily focus on ADHD alone but shed light on other mental health problems such as depression and anxiety".* In this way, the university can create inclusive policies whose goal would be to enhance the social and learning experiences of every student (Marshall et al., 2017).

Other students felt that there must be a specific focus on the symptoms of ADHD, as indicated by Participant 4 who said, *"The NWU should teach students how to improve their attention".* This recommendation would help students identify and work on their symptoms if necessary. The programmes on ADHD symptoms would not only focus on symptoms of ADHD but also equip students with information on how to address their problems if they are symptomatic (Anastopoulos & King, 2015).

4.3.3.3 Subtheme 3: Timetable and class adjustments

Based on the participants' reports, time seems to be an important factor in determining the effectiveness of how students learn, for example, the time a class commences, or the amount of time spent in class, which could promote or hinder students' learning. The students were very vocal about the timetable and how it could be better adjusted to enhance their learning experiences.

One of the most pragmatic suggestions from a student regarding attention and energy is that some modules need to be attended in the morning and others later during the day. According to the participants, this depends on the level of difficulty and the energy required to learn them. Participant 3 mentioned, *"Some modules should be taught in the morning and others later during the day depending on the module's difficulty".* Most of the students mentioned that in the morning they are still energetic, and their cognitive resources and energy are restored; thus, they are ready to have a productive day (Pope, 2016).

Other students focused on the length of the sessions. They felt that an hour of class time was too long and had a huge bearing on their attention difficulties. One of the most recommended ways to enhance learning students is to have breaks in between classes (Lee et al., 2015). Participant 6 suggested, *"One-hour classes have 30 minutes breaks in between to help improve the attention of students".* Participant 9*,* who supported the above statement, said *"Lecturers should encourage group discussion after every 30 minutes to keep the class interesting and avoid boredom".*

4.3.3.4 Subtheme 4: Rest and sleep

One of the personal but commonly shared recommendations from the students was to rest when it is time to rest. They mentioned that the life of a student is hectic and full of activities. In-between their academic life there is their social life which includes socialising during weekends and going to parties or other social events (Knouse & Fleming, 2016). All this can be strenuous and, if not managed well, can exacerbate attention difficulties, which may cause more psychological problems, such as anxiety and depressive symptoms, especially if a student is not doing well academically. According to Agoha et al. (2016), students who have better sleeping habits and rest

patterns perform academically better than their peers. Participant 5 mentioned, "*During the last exams I had to write 3 papers in 3 consecutive days, meaning that I could not reset or sleep even though I know the importance of resting".* This student went on to elaborate on how this arrangement had a negative impact on his examination performance, even though he was performing relatively well in the modules before the exam period.

Another personal recommendation that was common amongst the participants was that students should avoid studying at the last minute since this could lead to feeling overwhelmed, especially if the work has piled up. Participant 7 suggested, *"Students should avoid doing their work in the last minutes as this can have a negative impact on performance as students".* Moreover, Küchler et al. (2019) maintain that although procrastination is common among students in higher education institutions, it has a positive relationship with negative outcomes, students' health, and academic performance.

Although the above statement was a prominent idea and shared experience, one student alluded to the premise that the university is supposed to train students for future employment, and last-minute pressure is to be expected in the world of work; therefore, she appreciated the pressure of last-minute studying. Moreover, Participant 4 mentioned, *"I do not see anything that the university is doing to help me with my inattention, and I feel like it is my responsibility to manage it by seeking help where necessary".* Going into higher education does not only mean learning facts and figures but also acquiring the skills and qualities to think productively and be creative (Wagner, 2010).

4.4 Conclusion

This study was a step in the right direction and showed that there is some progress in understanding ADHD in adults. There is a strong relationship between the challenges the students face and what they recommended should be done to alleviate their predicament. The application of Bronfenbrenner's ecological systems theory comprehensively and effectively helps explain the

dynamics of the student's interactions and environment. Most of their solutions are practical and implementable, but it seems like many of these solutions would have to be made at the management level. This goes to show the amount of power and responsibility the university has in addressing these issues. What is encouraging is that students do not see themselves as passive individuals and appreciate the active role they have to play in managing their shortcomings by taking responsibility, which is empowering for them.

• CHAPTER FIVE

• SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The literature shows that there is some progress in understanding ADHD in adults, particularly their experiences. Although this is the case, it is evident that large-scale studies with bigger samples are required for us to gain substantial confidence in the conclusions we reach about this group. A more rigorous clinical assessment of the student population living with ADHD by qualified professionals would lead to even greater insights. Nevertheless, this chapter summarises the findings of the study, draws conclusions and makes recommendations based on the findings and the research objectives.

5.2 Synchronised findings, conclusions, and recommendations

5.2.1 Research Objective One

Although the first research objective was to explore and describe the challenges of students living with symptoms of ADHD regarding their psychosocial well-being, and the sample used in the study had not been clinically diagnosed with ADHD, they were not immune from the many challenges encountered by their diagnosed peers living with ADHD, as indicated in the literature. Most of the participants complained about experiencing attention problems, hyperactivity, and impulsive symptoms, which made their lives challenging compared to an average student.

Most of the challenges that participants experienced came as a byproduct of the aforementioned predominant symptoms of ADHD. For instance, the participants complained of manifesting anxiety or depressive symptoms as a result of their academic and social life which led to most of them preferring to withdraw from other people or situations to alleviate their anxiety.

This goes to show the importance of making mental health educational programmes compulsory within the institution. This will help students identify where and when to seek help and also inform them on how to better help themselves if it is applicable and necessary, which is empowering.

5.2.2 Research Objective Two

As the second research objective was to explore and describe the positive experiences of students living with symptoms of ADHD regarding their psychosocial well-being, the study highlighted the involvement and active participation shown by the students in their lives by taking responsibility for their behaviour. Despite the challenges the students faced regularly, because of the symptoms of ADHD, they embraced them and showed some degree of optimism. Similar to what Dawson and Bernier (2013) postulate regarding individuals living with ADHD, most of the participants were relieved to learn that what they were experiencing could be due to ADHD symptoms. Learning and understanding ADHD brought them a sense of relief by explaining their previous behaviours and relationship dynamics for which they had blamed themselves.

The participants showed awareness and appreciation of the resources and supportive structures in their immediate environment. For instance, most of the participants mentioned how they appreciated their lecturers' patience and help since their behaviour could be disruptive in class sometimes. The participants also acknowledged that mechanisms existed in their lives, and that they have power to propel their lives in the direction they aspire to reach. However, most of the participants did not know about departments, such as the disability unit, counselling unit and the student life department, primarily because these students had never been clinically diagnosed with ADHD or any other mental health disorder.

Another important part of learning they appreciated was the supportive structures and mechanisms, such SIs and tutors who not only offer supplemental assistance for classes but provide opportunities to form positive relationships and mentorships. However, the participants did not all

have the same experiences. Whilst some students found online classes helpful as alternative ways of learning, others felt they lost their productivity because of the absence of pressure that comes with being present in class physically. However, many of the students felt that the introduction of different teaching techniques and approaches gave them an opportunity to explore and utilise different methods, which they appreciated.

Most of the students are not aware of the support structures that exist within the university premises, primarily because they had never been diagnosed with ADHD or any other mental health disorder. This suggests that the university needs to develop more intensive orientation and awareness programmes to familiarise students with its support structures.

5.2.3 Research Objective Three

Although research objective three was to make recommendations to improve the experience of psychosocial well-being of students living with symptoms of ADHD, as Carl Rogers (2013) implies through his humanistic and person-centred perspective, individuals are the best at devising solutions to their problems. Likewise, the participants, as individuals experiencing the symptoms of ADHD, had recommendations for improving their learning and social experiences, which were intertwined with the problems they faced.

Most of the recommendations were based on them taking charge of their education and lives, such as evaluating their lecturers and recognising their limits as students, which the university's management had the power to change. Therefore, they recommended that the university run educational programmes on ADHD and mental health as a whole. Other suggestions from the participants included class and timetable adjustments to accommodate and address their attention difficulties.

Students need to be empowered and included in the decision-making process and the development of university policies and strategies, for instance, through surveys. This means that

students should take advantage of their power to choose and elect leaders through structures like the SRC and participate in their learning process through university surveys and petitions, which will be valuable for both the university and the students. In addition, this will help students have their voices heard on matters that are important to them and impact their daily lives as students, especially since the exact number of students living with ADHD is unknown within the institution.

5.3 Conclusion

Many students who might have ADHD have no idea about it and go through life thinking that what they experience is normal, or that they are different; thus, they have managed to develop benevolent coping mechanisms to help them navigate through life. These strategies work on a personal level, which in most cases is influenced by their context and personal experiences. However, what works for one student does not necessarily mean it will accommodate others, even though they might be experiencing the same symptoms and same challenges. This makes it imperative for large-scale studies with this identified group to be conducted to understand the daily lives of these students fully.

This study proved that given the opportunity, many more students might be diagnosed with ADHD, taking into account their history and current experience, although they were never clinically diagnosed with ADHD before. However, irrespective of the limitations in the fast-growing research on ADHD in university students, the literature and this study show that students living with symptoms of ADHD struggle compared with their university peers living without ADHD symptoms.

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APPENDICES

Appendix A: Informed Consent

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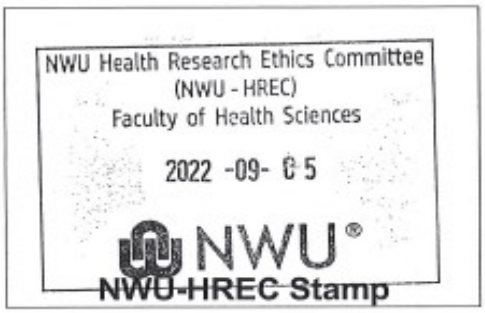

INFORMED CONSENT DOCUMENTATION FOR NORTH-WEST UNIVERSITY STUDENTS LIVING WITH SYMPTOMS OF ATTENTION DEFICIT HYPERACTIVE DISORDER (ADHD).

TITLE OF THE RESEARCH STUDY: Psychosocial well-being of North-West University students living with symptoms of Attention Deficit Hyperactive Disorder (ADHD)

ETHICS REFERENCE NUMBERS: NWU-00214-21-A1

Supervisor : Mr Curwyn Mapaling

CO-SUPERVISOR: Dr Koketso Matlakala

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You are being invited to take part in a **research study** that forms part of a **master's study**. Please take some time to read the information presented here, which will explain the details of this study. Please ask the researcher or person explaining the research to you any questions about any part of this study that you do not fully understand. It is very

important that you are fully satisfied that you clearly understand what this research is about and how you might be involved. Also, your participation is **entirely voluntary** and you are free to say no to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part now.

This study has been approved by the **NWU-Health Research Ethics Committee of the Faculty of Health Sciences of the North-West University (NWU-00214-21-A1)** and will be conducted according to the ethical guidelines and principles of Ethics in Health Research: Principles, Processes and Structures (DoH, 2015) and other international ethical guidelines applicable to this study. It might be necessary for the research ethics committee members or other relevant people to inspect the research records.

What is this research study all about?

- We plan to qualitatively identify, explore, and describe the experiences of NWU students living with symptoms of ADHD regarding their psychosocial well-being.
- This study will be conducted in a private venue of the participant's choice and will be done by experienced health researchers trained in qualitative research. A minimum of 12 participants will be included in this study.

Why have you been invited to participate?

You have been invited to be part of this research because:

- You are an 18-year-old or above
- You are an NWU student living with the following symptoms; hyperactivity, Impulsivity (hasty), fidgeting (restless), difficulty focusing, short-attention span, anxiety and excitement.
- You are efficiently fluent in English or Setswana

You will unfortunately not be able to take part in this research if you have been diagnosed with a co-morbid mental health disorder such as depression or anxiety, because these mental health disorders may present with symptoms that are similar to ADHD and this study specifically focuses on students living with symptoms of ADHD.

What will be expected of you?

- The data collection will occur electronically through the use of an online semi-structured interview. The questions of the interview will be open-ended and therefore they allow for flexibility and more in-depth answers from your personal experiences, which will help the primary researcher to gain a comprehensive experiential understanding of the psychosocial well-being of students living with symptoms of ADHD.

Will you gain anything from taking part in this research?

- There are no direct benefits, but you will be given a chance to share your own personal experience which will be a shared experience to some extend with other students who are living with symptoms of ADHD. This is important because it

allows for you to be understood, which is important for you to be respected and be treated with dignity whilst being educated, thus it will enable you to live a meaning full life.

- The other gains of the study is that the study will benefit the broader community of students living with symptoms of ADHD, because the knowledge gained through this research will create awareness on the psycho-social well-being of North-West University students living with symptoms of ADHD and guide future research in this regard. The NWU can create a learning environment that takes into consideration its ADHD students, to enhance the learning experience of these students

Are there risks involved in you taking part in this research and what will be done to prevent them?

- Your attention may wonder during the answering of the questions, but you can take sufficient breaks in between.
- The counselling departments of the three campuses will be available free of charge if you experience any psychological distress as a result of the research process.
- There are more gains for you in joining this study than there are risks.

How will we protect your confidentiality and who will see your findings?

- Anonymity of your findings will be protected by keeping the collected data safe on the primary researcher's personal computer, which is password protected. Anonymised data will be sent to the supervisors whose computer is also password protected, as well as to an independent co-coder Melissa Mashaba. Your privacy will be respected by asking you to find a quiet and private location when answering the interview questions to ensure privacy. Your results will be kept confidential by the primary researcher. Only the researchers and the supervisors and the core coder will be able to look at your findings. Findings will be kept safe by locking hard copies in locked cupboards in the researcher's office and for electronic data it will be password protected. As soon as data have been transcribed it will be deleted from the recorders.) Data will be stored for 5 years.

How will you know about the results of this research?

- We will give you the results of this research when the study is completed by a form of a presentation. The date of the results presentation by the primary researcher will be clearly communicated to you during the date of data collection. The presentation will occur through a zoom meeting using a link that will be sent to your personal emails.
- You will be informed of any new relevant findings by the primary researcher through your email.

Will you be paid to take part in this study and are there any costs for you?

To compensate for your time and energy you will receive a R15.00 airtime voucher within 24 hours through your e-emails after completing the interview.

Is there anything else that you should know or do?

- You can contact Mpho Mpetha at 074 437 5860 or email: mjmpetha@gmail.com if you have any further questions or have any problems.
- You can also contact the NWU-Health Research Ethics Committee via Mrs Carolien van Zyl at 018 299 1206 or carolien.vanzyl@nwu.ac.za if you have any concerns that were not answered about the research or if you have complaints about the research.
- You will receive a copy of this information and consent form for your own purposes.

Declaration by participant

By signing below, I ..... agree to take part in the research study titled:.....

I declare that:

- I have read this information/it was explained to me by a trusted person in a language with which I am fluent and comfortable.
- The research was clearly explained to me.
- I have had a chance to ask questions to both the person getting the consent from me, as well as the researcher and all my questions have been answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be handled in a negative way if I do so.
- I may be asked to leave the study before it has finished, if the researcher feels it is in the best interest, or if I do not follow the study plan, as agreed to.

Signed at (*place*) ..... on (*date*) ..... 20....

....

Signature of participant **Signature of witness**

Declaration by person obtaining consent

I *(name)* ..... declare that:

- I clearly and in detail explained the information in this document to

  .....
- I did/did not use an interpreter.
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above
- I gave him/her time to discuss it with others if he/she wished to do so.

Signed at (*place*) ..... on (*date*) ..... 20....

.....

Signature of person obtaining consent

Declaration by researcher

I *(name)* ..... declare that:

- I explained the information in this document to ..... **or** I had it explained by ..... who I trained for this purpose.
- I did/did not use an interpreter
- I encouraged him/her to ask questions and took adequate time to answer them or I was available should he/she want to ask any further questions.
- The informed consent was obtained by an independent person.
- I am satisfied that he/she adequately understands all aspects of the research, as described above.
- I am satisfied that he/she had time to discuss it with others if he/she wished to do so.

Signed at (*place*) ..... on (*date*) ..... 20....

.....

Signature of researcher

Current details: {23239522} G:\My Drive\9. Research and Postgraduate Education\9.1.5.6 Forms\HREC\9.1.5.6_NWU-HREC_ICF_Template_Feb2019.docm
7 February 2019

File reference: 9.1.5.6

Appendix B: Interview Guide

List of interview questions as approved by the COMPRES scientific committee and HREC:

1. As a student who is living with symptoms of ADHD, what is your experience regarding your psychosocial well-being?

Is this different from your past life before being an NWU student?

If yes, in what way?

2. As a student with symptoms of ADHD, tell me about your challenges regarding your psychosocial well-being and how you manage them.

3. What, in your experience, contributes to your psychosocial well-being as a student living with symptoms of ADHD?

4. As a student living with symptoms of ADHD, tell me about your positive experiences regarding your psychosocial well-being.

5. What, in your experience, hinders (gets in the way of) your psychosocial well-being as a student with symptoms of ADHD?

6. What recommendations can you make to the university to improve or enhance the psychosocial well-being experience for students living with symptoms of ADHD?

Appendix C: Advertisement

You are invited to participate in a research study!!!

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

Are you experiencing any of the following symptoms?

- **Behavioural:**
  - ✓ Hyperactivity
  - ✓ Impulsivity (hasty)
  - ✓ Fidgeting (restless)
- **Cognitive:**
  - ✓ Difficulty focusing
  - ✓ Short-attention span
- **Mood:**
  - ✓ Anxiety
  - ✓ Excitement

Online interview
Follow this Link:

ADHD-PARTICIPATION FORM (google.com)

This study aims to explore the psychosocial well-being of North-West University students living with symptoms of Attention Deficit Hyperactive Disorder (ADHD).

In order to participate you should be:

A registered NWU student presenting with symptoms of ADHD.
18 years of age or older.
Have a Gmail account.
Efficiently fluent in English or Setswana.
Willing to participate and able to give written informed consent.

Participants will be expected to follow a Google Form where by they will acknowledge their willingness and interest to participate, after which they will receive informed consent forms to fill from Mr. Tshepo Mashele to sign after at least a week on the date and time the two parries agreed on. The data gathering process will occur through online semi-structured interviews. Free data will be provided to the participants after requesting it from this email: tshepomashele@gmail.com or this cell phone no.: 081 011 5075

Participants will receive a R15.00 worth of airtime voucher within 24 hours after completing the interview.

Appendix D: HREC Approval

NWU®
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YUNIBESITI YA BOKONE-BOPHIRIMA

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: http://www.nwu.ac.za

Health Sciences Ethics Office for Research, Training and Support

North-West University Health Research Ethics Committee (NWU-HREC)
Tel: 018-299 2092
Email: Wayne.Towers@nwu.ac.za

Mr C Mapaling
Psychology
COMPRES

5 September 2022

Dear Mr Mapaling

APPROVAL OF YOUR AMENDMENT REQUEST BY THE NORTH-WEST UNIVERSITY HEALTH RESEARCH ETHICS COMMITTEE (NWU-HREC) OF THE FACULTY OF HEALTH SCIENCES

Ethics number: NWU-00214-21-A1

Kindly use the ethics reference number provided above in all future correspondence or documents submitted to the administrative assistant of the North-West University Health Research Ethics Committee (NWU-HREC) secretariat.

Study title: Psychosocial well-being of North-West University students living with symptoms of Attention Deficit Hyperactive Disorder (ADHD)

Study leader/Researcher: Mr C Mapaling

Student: M Mpetha - 27434613

You are kindly informed that your amendment request (change in selection criteria, title and research team members) to the aforementioned project has been approved. Any future amendments to the proposal or other associated documentation must be submitted to the NWU-HREC, Faculty of Health Sciences, North-West University, prior to implementing these changes. These requests should be electronically submitted to Ethics-HRECApply@nwu.ac.za, for review BEFORE approval can be provided, with a cover letter with a specific subject title indicating, "Amendment request: NWU-XXXXX-XX-XX". The letter should include the title of the approved study, the names of the researchers involved, the nature of the amendment/s being made (indicating what changes have been made as well as where they have been made), which documents have been attached and any further explanation to clarify the amendment request being submitted. The amendments made should be indicated in yellow highlight in the amended documents. The *e-mail*, to which you attach the documents that you send, should have a *specific subject line* indicating that it is an amendment request e.g. "Amendment request: NWU-XXXXX-XX-XX". This e-mail should indicate the nature of the amendment. This submission will be handled via the expedited process.

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

We wish you the best as you conduct your research. If you have any questions or need further assistance, please contact the Faculty of Health Sciences Ethics Office for Research, Training and Support at Ethics-HRECApply@nwu.ac.za.

Yours sincerely

Digitally signed by Prof Petra Bester
Date: 2022.09.14 10:01:35 +02'00'

Chairperson: NWU-HREC

Appendix E: NWU RDGC Permission Letter

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

NWU RDGC PERMISSION GRANTED LETTER

Based on the documentation provided by the researcher specified below, on 24/10/2022 the North-West University (NWU) Research Data Gatekeeper Committee (NWU-RDGC) hereby **grants permission** for the specific project (as indicated below) to be conducted at the NWU:

Project title: Psychosocial well-being of North-West University students living with symptoms of attention deficit hyperactivity disorder.

Project leader: **Mr Curwyn Mapaling**
Researcher/Project Team: **M Mpetha**

Ethics reference no: **NWU-00214-21-S1**
NWU RDGC reference no:**NWU-GK-21-059**

Approval date: **24/10/2022** **Expiry date**: **24/10/2023**

General Conditions of Approval:

- The NWU-RDGC will not take the responsibility to recruit research participants or to gather data on behalf of the researcher. This committee can therefore not guarantee the participation of our relevant stakeholders.
- Any changes to the research protocol within the permission period (for a maximum of 1 year) must be communicated to the NWU-RDGC. Failure to do so will lead to withdrawal of the permission.
- The NWU-RDGC should be provided with a report or document in which the results of said project are disseminated.
- Due to the COVID-19 pandemics the Committee would like to advice the researcher to practice the necessary caution and adhere to the National Covid-19 Guidelines when conducting research with participants.

Please note that under no circumstances will any personal information of possible research subjects be provided to the researcher by the NWU RDGC. The NWU complies with the Promotion of Access to Information Act 2 of 2000 (PAIA) as well as the Protection of Personal Information Act 4 of 2013 (POPI). For an application to access such information please contact Ms Annamarie De Kock (018 285 2771) for the relevant enquiry form or more information on how the NWU complies with PAIA and POPI.

The NWU RDGC would like to remain at your service as scientist and researcher and wishes you well with your project. Please do not hesitate to contact the NWU RDGC for any further enquiries or requests for assistance.

Yours sincerely

Prof Jeffrey Mphahlele

Chairperson NWU Research Data Gatekeeper Committee

Original details: (22951930) C:\Users\22951930\Desktop\test 2.docm
13 November 2018

Current details: (22951930) M:\OSS1\8539\Monitoring and Reporting Cluster\Ethics\Applications RDGC\Updated RDGC Permission Letter.docm
15 November 2018

File reference: 1.1.4.3

Appendix F: Language Editor Declaration

DR MAUREEN LILIAN KLOS
PROFESSIONAL EDITOR
BA; STD; BEd (*cum laude*); MEd *(cum laude)*; DEd
Registered with the SAPEG (reg. no. KLO004)
maureenklos@gmail.com

EDITOR'S DECLARATION

I,

DR MAUREEN LILIAN KLOS,

Being the holder of the following qualifications:

BA; STD; BEd (*cum laude*); MEd *(cum laude)*; DEd

Hereby certify that I am the English language editor of the following document:

PSYCHOSOCIAL WELL-BEING OF NORTH-WEST UNIVERSITY STUDENTS LIVING WITH SYMPTOMS OF ATTENTION DEFICIT HYPERACTIVITY DISORDER

by

M MPETHA

27434613

I hereby certify that I have edited the language, formatting and referencing in the above-mentioned document in their entirety. However, I assume no responsibility or liability for any post-editing errors or omissions.

31 October 2022